CHINESE RUGS

GORDON B. LEITCH

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CHINESE RUGS

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DESIGN OF A MODERN CHINESE RUG

This is one corner of a modern Chinese pictorial rug, in which the "Eight Fairies" (see Plate 13) are shown. The outer border consists of clouds, with a tendency to the *ju-i* form, and bats. The inner border consists of the conventionalized lotus and a fret, resembling in some respects a highly conventionalized dragon. The whole presents a simple, yet striking, motive. Rugs of this type, in which the faces, or whole figures, are raised above the pile to present the design in three dimensions have their source chiefly among the Peking artisans.

(Courtesy of Mr. C. Chang)

GORDON B. LEITCH

CHINESE RUGS

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With Illustrations Collected by the Author

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To

THOSE WELL MEANING FRIENDS

WHOSE MANY QUERIES

FORCED ME TO GATHER

MUCH OF THIS

INFORMATION IN SELF-DEFENSE

THIS VOLUME

IS RESPECTFULLY DEDICATED

PREFACE

In compiling this work, the author is urged by the lack of a volume which deals adequately with the subject of the Chinese Rug, having learned from experience that no volume on the general subject of Oriental Rugs deals satisfactorily with the Chinese member, if indeed this is mentioned at all, and that the few existing treatises on the latter subject are concerned with a single phase of the industry, or else yield a superficial consideration of the general topic.

This volume is not intended as an encyclopædia of information on the subject, and the informed reader will, no doubt, find numerous omissions. It is intended, rather, for the individual who has a reasonable interest in Chinese Rugs, as one phase of a liberal acquaintance with Oriental arts. However, an effort has been made to include more than the salient features, and essential ramifications, of the subject.

For the most part, the facts recorded herein are the result of experimental investigations, and field observations, carried on over a period of several months, based upon a previous acquaintance with the subject. Occasional recourse to the scanty literature has been had; every effort has been made to verify unusual material so obtained. Acknowledgment of the use of previously published material has been made, wherever possible, either in the text or in references. For the benefit of those wishing to delve more deeply into the subject, a bibliography of practically all the allied literature, will be found at the conclusion.

PREFACE

The author wishes to express his gratitude for assistance and coöperation rendered by the numerous factory owners, operators of home looms, and others who may have contributed in any way, a detailed acknowledgment of all such aid being impossible in a work of this nature. Particularly am I indebted to Mr. K. S. Chu, and Mr. C. C. Lin, for numerous suggestions, and for permission to photograph, and secure sketches of, rugs owned by their company. My former associates, Drs. K. Chia, David H. Kiang, James K. Shen, C. S. Yang, K. F. Yao, and S. Zia have been of great aid in verifying many of the facts and legends obscured in Chinese folk-lore and mythology. Miss V. C. Cass has been of great assistance in research matters involving the literature. The authorities of the Victoria and Albert Museum, London, England, the Metropolitan Museum of Art, New York, U. S. A., and the Shosoin, Nara, Japan, have been exceedingly courteous, in permitting minute examination of the antique rugs in their possession, and photographing. My thanks are tendered to Dr. Wendell J. Stainsby, and Dr. Clarence E. Maguire, for assistance in proof-reading, and correcting the manuscript, as well as for coöperating in securing photographs.

In reproducing the English equivalent of Chinese words, the Mandarin romanization has been utilized.

GORDON B. LEITCH.

Portland, Oregon,
March 31, 1928.

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CHAPTER ONE

INTRODUCTION

In the general field of Oriental Rugs, the Chinese Rug holds a place unique, by reason of its distinctively symbolic design, and contrasting color combination, as well as by the geographical and historical association with the tradition and folk-lore of the Celestial Nation. An anonymous writer has truthfully penned, "The products of the Chinese carpet makers are so vastly different from those of other Oriental weavers, as to constitute a story by themselves."

The *ti t'an* has been associated with the Chinese people for so many centuries, with the humble as well as the mighty, in private as well as in public, in their religious and ceremonial life, that to write of it fully is to tell much of Chinese history, in its many ramifications. This would be impossible in a volume of modest dimensions, consequently only enough of this is included to furnish an adequate understanding of the subject, it being felt that a satisfactory knowledge of the weaving technique, and other fundamental features of the art must suffice.

Though for centuries, rug making has been associated with the Orient, and has occupied a considerable portion of the peoples' efforts, it is only within modern times that the Western world has realized, to any extent, the charm of the Chinese carpet, save for an occasional connoisseur, or curio collector, who ventured far afield in search of new specimens for his collection. Prior to the world war, Chinese rugs were comparatively little known, ranking much below the rugs of the Near East in demand, but during this struggle, with those regions closed to ordinary commerce, dealers perforce turned to the Far East, wishing to "carry on" as best they might, with the lowly Chinese member of the rug family, until such time as

normality might be reëstablished. Their educational selling campaigns focused attention upon the Chinese rug as had never occurred before, with an entirely unexpected result. The buying public, having sensed the beauties of the Chinese rug for itself, refused to be deprived of the product, but loudly clamored for more specimens, with the result that the demand for these rugs has increased so rapidly as to be the cause of the founding of several business houses of merit.

It must be borne in mind, however, that there are Chinese rugs, and Chinese Rugs. Many are the kinds and varieties seen in the erstwhile land of the dragon. They are made from silk, and the hair of the cat, dog, cow, ox, yak, goat, camel, and sheep, the last named being known as wool. Their styles are legion. Fortunately, today most of the rugs, all but a few for tourist curio collectors, are made of wool, of varying grades, and unless otherwise specified, it is this type of rug with which the following pages deal.

In addition to a classification on a basis of material used, the rugs are further differentiated by the type of workmanship, and the locality of manufacture, the latter usually being manifested by some technical alteration in the former, often minute. To an expert, rugs made in Peking are quite different from those made in Tientsin, though these are similar in many respects. These in turn are different from those woven in Ning Hsia, or Mongolia, and these differ from each other. This will be discussed at greater length in a succeeding chapter.

Finally, there are old rugs and new rugs, radically different, yet equally interesting, especially by contrast and comparison. As this volume is intended for those interested in all phases of the Chinese Rug, rather than for the collectors of antiques, most of the consideration is devoted to other topics, though

enough discussion of the antique rugs to provide a satisfactory working knowledge is included. For those profoundly interested in this class of rugs, very excellent descriptions may be found by consulting several of the volumes listed in the bibliography.

Figure 1: Chinese Rug Districts. The Chief rug centers of China are underlined.

Before launching into the subject matter, it might be well to explain certain technical terms connected with rugs and the rug industry, as this is conducive to a clear understanding of what otherwise may be somewhat confusing. Through frequent usage, the words rug and carpet are used synonymously, and this practice has been followed. The following will provide a working knowledge:

PLATE 1

EIGHTH CENTURY RUG

This is one of the oldest rugs existing to-day. It is probably as fine an example as any of those Chinese antique pieces in possession of the Japanese Imperial household. Its known history dates back to the 8th century. It is made by a process of felting, rather than knot tieing.

In size it is approximately 8′ 5″ by 4′ 3″. The ground is now a grayish white, and the border is a brown, as in most of the old pieces. The figures are in shades of brown and indigo, the latter predominating. In the center are two phoenix birds in *yin yang* form, while surrounding these are various rocks, supporting a plant which is not clearly defined as to type. Interspersed are butterflies and clouds. In the corners the clouds are depicted in *ju-i* form, which establishes the Chinese origin of the design.

Courtesy of the Shosoin, Nara, Japan

PLATE I EIGHTH CENTURY RUG

Courtesy of the Shosoin, Nara, Japan

PLATE 2 PRE-MING WEAVINGS

PLATE 2

PRE-MING WEAVINGS

(*Upper*) One of the few pre-Ming rugs in existence to-day, a part of the collection in the Japanese Imperial Household. In colors it resembles the others with brown border, and indigo and brown figures upon a gray background. The figures are conventionalized lotus flowers and rock plants.

(*Lower*) An 8th century felted rug, from the collection of the Japanese Imperial Household. The design consists entirely of lotus flowers and leaves, highly conventionalized. Colors are indigo and brown upon a white ground.

Loom: The mechanical apparatus upon which the rug is woven, consisting of a heavy wooden framework, over which the threads that are to be the foundation of the rug are tightly stretched.

Warp: The threads stretched upon the loom, around which the carpet is woven by a process of knotting.

Weft or Woof: The cross-threads, which are interspersed with the threads knotted to the warp strings, and tightened to make the weaving secure.

Knots: The yarn which forms the substance of the rug is tied around the warp threads, forming knots. The texture of the carpets depends upon the fineness of the knots.

Pile or Nap: The substance of the rug projecting beyond the level of the warp and weft; the threads projecting from the knots tied around the warp strings; the body substance of the rug.

Web: The continuation of the insertion of weft threads beyond the extent of the pile, to form a securely finished end of a rug, and also act as a protection for the end of the pile.

Selvage: The method of securing the edges of the rug, so that the knots forming the pile are protected, in which contiguous warp threads are included in the weaving process with weft threads, but lacking pile threads.

A convenient method of estimating the texture of the rugs, for purposes of comparison, is by the number of knots, or threads, in a given area. The usual standard of measure in China is the linear foot, the rugs being said to contain a certain number of knots to the foot. Occasionally, a square inch, or square foot, is the standard used. In this connection a confusing practice has arisen; in many centers, especially Peking and Tientsin, rug texture is stated in threads per foot, rather than knots. Although two threads come from each knot, the

fact is ignored, the terms knot and thread being considered synonymous.

Recently an investigation has been launched to consider the advisability of using weight as a basis for comparison, particularly for purposes of export and import customs revenue. It seems unlikely that this standard will be generally adopted, for it fails to take into account the fundamental differences in the various rugs.

CHAPTER TWO

HISTORICAL AND GEOGRAPHICAL

THE origin of the art of weaving is obscured in antiquity, yet it is definitely known that woven articles were possessed by the earliest civilizations of which we have record. It seems reasonable to suppose that weaving came into being shortly after the human race had graduated from the stage of semi-nudity, into that of dressing skins, through sheer necessity of those tribes not possessing skins to protect themselves from the inclement elements. It is probable that their first weavings were concerned in the erection of crude shelters, but with fineness of technique, their efforts were transferred to the body, in the elaboration of crude clothing.

Necessity having been satisfied, and the creative instinct being active, it is not surprising that man's talents should have turned toward the production of the beautiful. History is filled with records of the elaborate and costly raiment of the ancient world, and the gorgeous tapestries: The ancient Egyptians are known to have had fine and regular weavings, likewise the Persians, Greeks and Romans. Chinese archæological investigations are continuously bringing to light fresh evidence to show that ancient China was not backward in the matter of the arts, especially those associated with the welfare of the people inhabiting those vast regions. It is a well established fact that Chinese silks and porcelains had reached a high standard of excellence even at the time of the Roman Empire. Unfortunately, no relics of the weavings of that period remain, nor have any been unearthed. There is a hope that with the continued awakening of China, the tombs of the ancient sages and dignitaries may be made available for archæological study, with interesting results.

Rug-making, as a special branch of the weaving art, is likewise of an obscure origin, lost in antiquity. It is more than likely that the Egyptians had many rugs, but none of these is preserved to us. A few old records indicate a thorough knowledge of weaving on the part of the tribes inhabiting the deltas of the Tigris and Euphrates. Old Chinese writings frequently mention the richness of the tapestries and hangings of the people. No doubt archæology will eventually solve the question as to the actual origin of rug-making, but in the meantime three main theories have been propounded, to explain the spread of the art from an original source. These are based largely upon an intensive study of antique carpets, and a thorough analysis of their manner of construction. While in many instances useful information can be thus obtained, it does not seem that sufficient data can be collected from the rugs alone, without regard for the inter-relation of contemporary artistic relics, in all their ramifications, together with a study of the people as they lived at that time.

It has been advocated, and with some reason, that ancient Egypt is the home of the rug. It is claimed that knowledge of the art of rug-making, with Egyptian influence, traveled to China by means of the wars with neighboring countries, and conquests of these by Chaldees, Persians, Greeks, Romans, Arabs, Tartars, and Mongols. In support of this is cited the fact that the swastika, so often seen in Chinese rugs, antique and modern, is of frequent occurrence in Egyptian records, as a symbol of good luck and abundance, happiness, and prosperity. It seems more probable that Egyptian origin should not be regarded too seriously, for this very symbol, one of the oldest known to mankind, continent wide in its distribution, is believed by most investigators to have had its origin in China.

There seems more reason to believe that carpet weaving

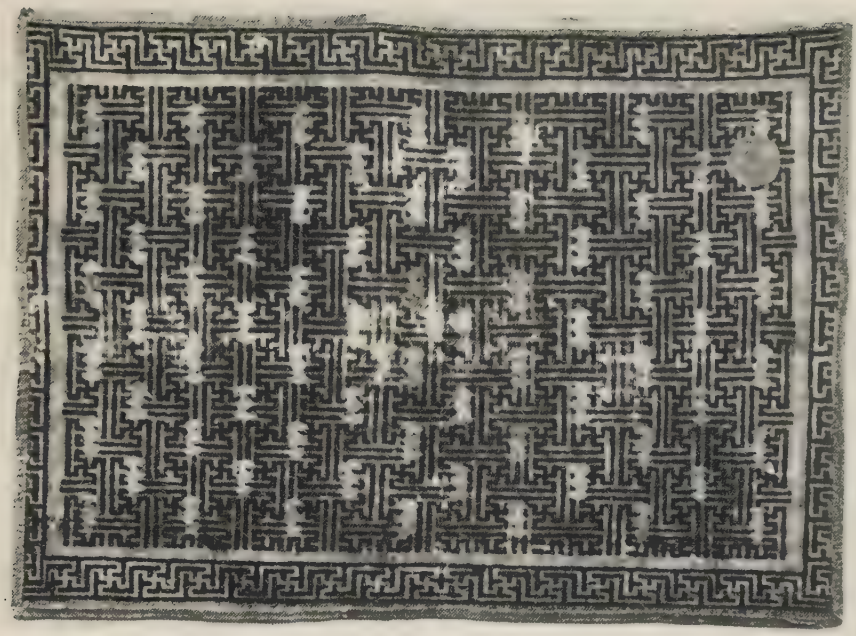
originated in the delta plains of the Tigris-Euphrates, as numerous records of that era testify to the high developments of the weaving arts. It might again be assumed that commerce and war played their part in distributing this knowledge, but lack of sufficient, accurate records on this subject precludes the possibility of verification. The absence of anything in the designs of Chinese carpets, that can be unquestionably linked with the civilization of Nineveh and adjacent centers, is a point against this theory. A fact which cannot be overlooked, but which may be mis-interpreted, is that the so-called Persian knot predominates in the weaving of Chinese rugs.

It cannot be proven that the Chinese carpet is indigenous. Likewise, it cannot be disproven. Four links in the chain of evidence tending to substantiate indigenous origin may be cited. The first is the well known fact that the Chinese of all living races have changed least their habits of living, of thought, and of art. The fact that all authorities on Oriental Rugs are agreed that the Chinese member is singularly different from all other types, is the second strong point in favor of local origin. A third link lies in the fact that Chinese rugs derived many of their designs from the ceramic art, the supremacy of China in this, in ages past, not being open to question. The fourth link, and probably the most weighty, is found in the record of conquest, and commercial interchange, both definitely known, to account for each slight modification in the designs and weaving technique of Chinese rugs. Having once created, it has been the age-old habit of the Chinese to borrow from their neighbors, improve, and with the addition of a typically Chinese touch, incorporate the modified result into their own life. The Chinese rug has by no means escaped this. Persian, Mohammedan, Tartar, Mongol, have all furnished their contribution. In this connection it is interesting to investigate those old car-

PLATE 3

RUGS ATTRIBUTED TO THE MINGS

Examples of the conventionalized and geometrical designs characteristic of the rugs of the Mings. The upper piece of bats superimposed upon the swastika is approximately six by four feet in size, with a blue pattern on a yellowish ground. The lower rug has red and yellow tints upon a blue ground, and is approximately five by three feet in dimensions. It is an "official" rug, with dragons and character symbols. Pile, warp and weft are of silk.



Courtesy of the Metropolitan Museum of Art, New York

PLATE 3 RUGS ATTRIBUTED TO THE MINGS

Courtesy of the Jen Li Company

PLATE 4 PEKING RUGS

PLATE 4

PEKING RUGS

These are typical of the modern product of the commercial looms found in Peking. The upper rug is 8′ by 10′, with 100 knots to the foot. Its colors are shades of taupe, with red, blue, green, and yellow, as required for the floral effects. The outer edging is of dark blue. The outer border is based upon the lotus and prune flowers, both of which are conventionalized in places. The inner border consists wholly of the plum blossom. These floral motives are combined in both corner supports and central medallion.

The lower rug is 9 by 12 with 90 knots. Colors are natural, based upon shades of powder blue taupe. This rug demonstrates well the balance of design found in the modern pieces. Three borders, through overlaps, convey the impression that they are an integral part of the pattern. The field is full, but not exaggerated. Floral and antique motives are about equally distributed.

pets (Plates 1, 2 & 23), which are stored in the Shosoin at Nara.

Their place of manufacture is not definitely known, but the weight of evidence contained in designs, colors, and symbols, clearly points to northern China. The first authentic record of them states that in 752 A. D. they were presented to the Todaiji Temple, at Nara (which contains the Daibutsu), but in 756 were presented by that temple to the Emperor Shomu. Since that time they have remained the personal property of the Japanese Imperial Household, stored in the Imperial Treasury, and examined only at rare intervals. The most interesting feature about them is that they were made, not by a process of knot tieing, but by a process of felting, which has been lost, thus clearly proving that the Persian knot was a later adaptation by the Chinese weavers, than their original manufacturing method. This evidence is substantiated by the record of interchange of weavers between Persia and China, under the direction of Kublai Khan, at the height of his power, and is a very strong point in favor of the indigenous origin of the Chinese Rug.

A final interesting suggestion is that carpet weaving came from Central Asia, to Chinese Turkestan, thence to China proper. The recent archæological investigations of Andrews and others point more and more to Central Asia as being the original home of man. If further research substantiates this assumption, it seems reasonable to suppose that rug weaving followed the races, in their scattering to distant lands, as a necessary adjunct, there to be modified, as were the people, by the physical, topographical, and political situation in which they found themselves.

It must be remembered that the topography of China is varied; it extends from level delta plains, through vast mountains

and gorges, to arid desert land, and lofty plateau. In each locality the customs of the people are slightly different; in most their spoken language is totally different. Yet, although some are semi-nomadic, they have preserved the essential features of a civilization long passed by. Modern China is divided by mighty rivers and mountains, into three chief groups of provinces; in each of these groups the races are vastly different. The southerners are a race of relatively smaller stature, who are possessed with a wanderlust; they till the low-lying land, cultivate their extensive rice fields, and though they may live and die within a few *li* of their birthplace, they form a class of emigrants. The northerners are a larger race in stature, and are more inclined to be growers of grains, horsemen and herdsmen, than their southern brothers. As with all northern races, they are a hardier people; the rigorous climate to which they are exposed has caused them to be the weavers. The third group, inhabiting the tablelands of Mongolia, Tibet and Turkestan, is very similar to the northerners; their strenuous life has kept the weaving arts alive among them, as have also their strong religious beliefs.

In spite of the fact that the Chinese rug has retained much of its original impressionistic elements, there is ample evidence to show that it has been successively influenced by outside forces, as is to be expected from the history of the Chinese. Egyptian and Persian influences, having come by means of an interchange of weavers between Persia, at the height of her career, and China, when she was supreme in the ceramic field, have left their effect. Probably the most influential of any art was that introduced with Buddhism; its effect, coming from India, with many indirect borrowings from the Greek, was particularly felt prior to the Mohammedan rebellion of 1871. Many designs, including many of the choicest, show this influ-

ence, even today. Between these two periods may be traced the strong effect exerted by Mongolian and Manchu influences. Even at the present time the Chinese rug is being affected by outer forces, for following the minor changes with the advent of the republic, and the great war, came the radical changes suggested by the foreigners of the western nations. So strong has this been that there are those who claim to see the day when the foreignized Chinese rug will completely dominate the art, though it is to be hoped this day, if inevitable, is in the distant future.

It is well substantiated that the early rugs were woven in the northern provinces, primarily for home use, either upon the *k'ang,* or for saddle-cloths and other coverings. The *k'ang,* or couch, is a necessary detail of every Chinese home; it is built of brick and mud, and is so constructed that the heat from the cooking hearth or fire passes through its hollow structure on its way to the outside. This is very convenient during the winter months, but less so in summer. Even to-day inland travelers carry their own coverings for the *k'angs* of the village inns. Other common uses for rugs were as coverings for doorways, and for night coverings, particularly for the boatmen on the Huang Ho.

With the advent of Buddhism, rugs came to be used as draperies and other hangings in temples, as well as supplying a noiseless substance under foot; from this, the idea of ornamentation spread more rapidly than formerly, until rugs were found in abundance in the homes of the rich, where they found a use as well as being objects of admiration. A few of these choice rugs, from time to time, reached the seaport cities, but not in sufficient numbers to arouse more than a passing interest, for they were found chiefly in the homes of princes and other dignitaries.

CHINESE RUGS

Prior to the late years of the Ch'ing dynasty, rug making remained an accomplishment of the northwestern provinces almost exclusively, Ning Hsia and the Kwei Hwa district being particularly noted. This fact is emphasized as being so even in the late thirteenth century, for the book of the Venetian traveler, Marco Polo, recorded the manufacture of carpets and wall hangings of many different colors, by the use of camel's hair, in the course of his description of the splendors of the palaces at Cambulac, as Peking was then known. Most of these came to the great Kublai Khan as tribute, it was believed.

Unfortunately, with the coming of the Mongols, these were lost to sight, and since then, have been replaced by the antique rugs of the Mings and Ch'ings, all of which were woven in inland centers, under patronage of the ruling house. In many instances this patronage was so beneficial that the rugs woven under it are so distinctive as to bear the name of the ruler who encouraged the art. Of late years, certain provincial governments, and mission schools, have done much to promote the art of rug making.

The point at which commercialism crept into the art is difficult to determine. It was not until the later decades of the nineteenth century, that the industry spread sufficiently seaward to become established in a magnitude to attract attention, and cause the outer world to recognize an additional type of Oriental rug, classified a "Tientsin" rug, from the port of export.

In 1860 a certain Lama priest appears to have taken a vacation in Peking. During his stay there, he attended many court functions, according to one version. At one of these affairs he conceived the idea of securing favor through supplying the court dignitaries most useful to him, with fine examples of woven rugs, the weaving of which was known to him. Another

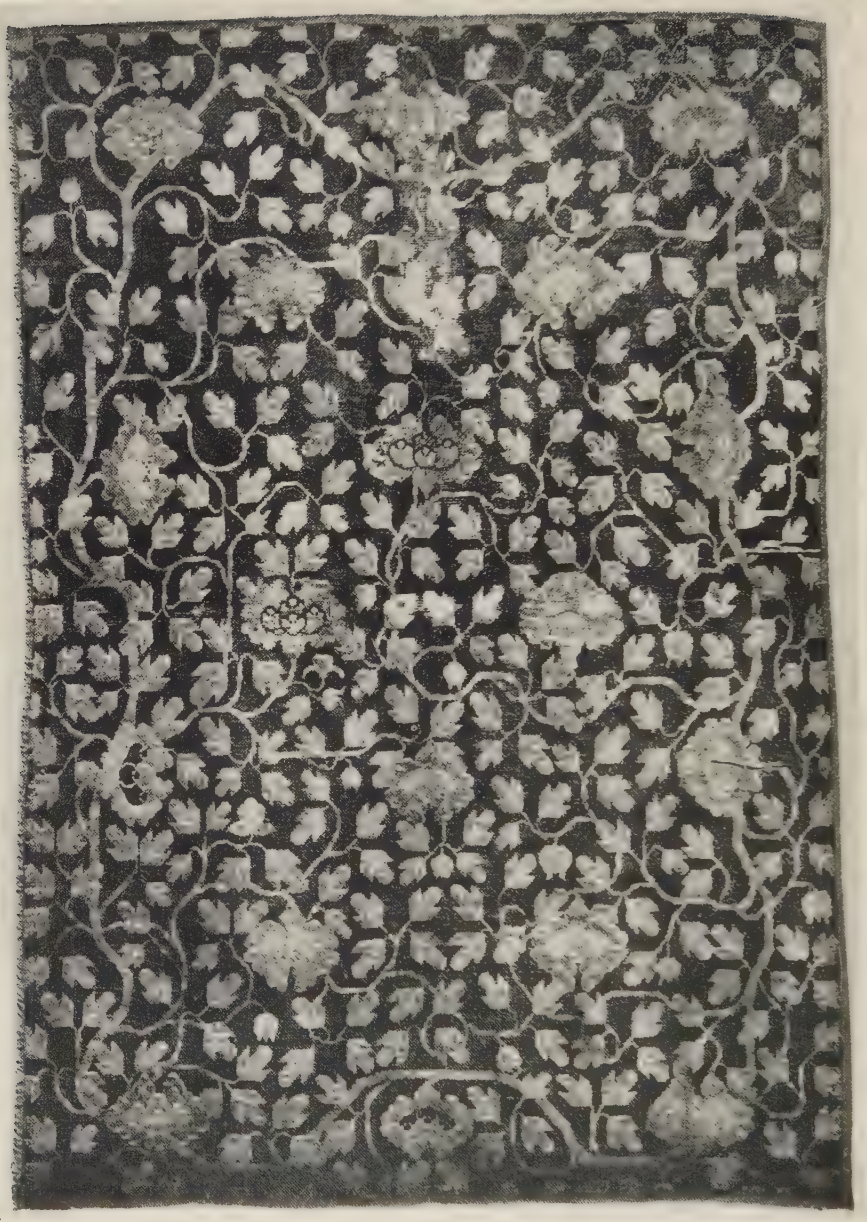
PLATE 5

SCENES IN A FACTORY COURTYARD

(*Upper*) Executive staff of factory, lft to right, waving foreman, designer, superintendent, and asst. dyer.
(*Upper*) Bales of raw wool freshly arrived from Mongolia, stored in courtyard awaiting washing. Workmen in winter clothes in background.
(*Lower*) Dyed wool sorted into piles by colors. Raw and undyed wool at left.
(*Lower*) Workmen sorting piles of dyed wool.

Courtesy of the Jen Li Company

PLATE 5 SCENES IN A FACTORY COURTYARD



Courtesy of the Metropolitan Museum of Art, New York

PLATE 6 K'ANG HSI RUG

PLATE 6

K'ANG HSI RUG

This rug was woven in Ninghsia, and shows the conventionality of the Ming design as handed down during the early years of the reign of Emperor K'ang Hsi. It displays a Persian influence. The design is essentially a conventionalized peony. The colors yellow upon a blue ground. It is approximately six by four feet.

version intimates that he initiated his weaving school through pity of the poor, but in any case, it is well known that such a school was indeed established, in the courtyard of Fu Ko Shih Ssu, at which he sojourned. At first the west court was appropriated, but soon the clamoring of those wishing to learn the art forced an expansion into the east court. The school was continued until the priest was forced to return to his temple, by which time the weaving of those in the west court had come to be of a quality superior to that elaborated in the east court. This fact is claimed to be the origin of the trade distinctions still occasionally found of *hsi-men* and *tung-men* rugs. Following the return of the monk, the weavers scattered, and continued their efforts as best they might, many falling by the wayside for every few who survived.

The western world first came to appreciate the value and art of Chinese rugs during the closing years of the nineteenth century. A German merchant, residing in Peking, purchased two small carpets, one of wool, and one of silk. These he sent to friends in Berlin, who admired them greatly, and sang their praises at every opportunity. Shortly after this, the Boxer uprising resulted in the looting of many Chinese homes and palaces, in which no foreigner had ever set foot, by the foreign relieving columns. As a result, many beautiful pieces entered Europe and America, to cause favorable outbursts wherever seen. A noticeable demand for additional examples of the art soon arose, in both continents. This was further stimulated, when in 1903, Chinese Rugs obtained first prize at the St. Louis International Exhibition, following which the first rug factory was established in Peking, to cater to this demand, by order of Emperor Kuang Hsu. This factory, Chi Chang Yung, was in operation for many years, but eventually lost its identity. During the period of its operation, a moderate demand for these

specimens of Oriental art persisted; during the interval, most of the antique Chinese rugs migrated to Europe, America, and Japan, where they now repose. Following this, as mentioned above, the great war in Europe created a situation very favorable for spreading the popularity of the Chinese rug, until to-day its right to a prominent position in the family of Oriental rugs is hardly disputed.

The factory industry of to-day is located chiefly in the two cities of Peking and Tientsin, the latter being the seaport of the former. The rugs manufactured in these centers have much in common, but can be distinguished rather readily. In the inland provinces where the humble peasants have not been contaminated by the commercial instincts of the foreigner, the finest examples of the weavers' art are still elaborated. The products of Ning Hsia and Pao Tow are the best examples; the weavers of the latter migrated from the former place. With the exception of the rugs of Peking and Tientsin, the weavings are made in the home fashion of the centuries, and as such may be considered true examples of Chinese carpets before western ideas modified the weaving processes. It should not be taken however, that because of this the rugs of the Peking-Tientsin factories should be condemned, as being examples of the prostitution of a noble art. Suffice it to say that most of these products, woven by skilled workers, are not inferior in artistic quality, but rather have resulted in the creation of a special type of their own, equally characteristic of a period in the art of Chinese rug weaving.

65273

CHAPTER THREE

THOSE WHO WEAVE

Almost within the past decade, civilization in the modern sense, has invaded the realm of the Chinese rug, until to-day commercialism has such a grip that it will never be removed, in all probability. There are many who lament the passing of the old régime, with its limited colors and designs, its peculiar irregularities, which made for a certain indescribable charm, sensed rather than felt, but there are also many of artistic temperament, who find much of the beautiful in the newer rugs, though their colors blend differently, and the workmanship is less sporadic. Fortunately, in spite of the advent of commercialism, rampant chiefly in the larger centers of the trade, the home industry still rules supreme in points not yet converted to the western methods, and here one may still find rugs being made in the manner of centuries long past. Yet the modern industry, commercialized though it is, actually elaborates a piece of workmanship which is generally superior to the older rugs, particularly in color, design, weave, and adaptability to the modern western home.

In far inland villages, particularly in the basin of the Huang Ho, the humble people still make their own rugs, largely for their own use. These find service as articles necessary to the small comforts of the home, chiefly for coverings to keep them warm, or as hangings to keep out the cold drafts in winter. The rugs are woven in the same manner as by generations of ancestors, varying little in workmanship, or design. For the most part, the people have the simplest needs, the simplest outlook on life; the rug is a family affair, in which all members have a small part, either directly or indirectly. Though all members share to some extent, the weaving is largely done by the older

PLATE 7

FLORAL RUG OF CH'IEN LUNG

A fine specimen of the weaving of the Ch'ien Lung period, in which multiple borders and guard stripes offset a saturated field. The borders display both geometrical and floral motives, while the ground is composed of the conventionalized lotus, with central medallion. Note the resemblance with the field pattern shown in Plate 11. It is approximately eleven and one-half by eight and one-half feet in size, with 90 threads. The colors are blues and reds upon toned white and red.

Courtesy, Director, Victoria and Albert Museum, London

PLATE 7 FLORAL RUG OF CH'IEN LUNG

Courtesy of Dr. K. Chia

PLATE 8 SCENES IN THE HOME INDUSTRY

PLATE 8

SCENES IN THE HOME INDUSTRY

(*Upper*) Sorting the wool into color groups, before combing.
(*Center*) Wool-combing with the primitive bow and thong.
(*Lower*) Spinning with a crude wheel.

adults, who in turn instruct the younger generation, and when it is proficient, retire to that reward tendered the aged by the Chinese, throughout the land. Contrary to the practice in some eastern rug-making countries, the shepherds in their nomadic wanderings are rarely the weavers. While tending the flocks, they may spin the wool, but that is usually as far as their efforts go toward making the rugs. The weaving is confined almost exclusively to the villages, and to the larger centers. Perhaps two or three families in a village make rugs, which are sold to the rest of the community at a minimal profit; only the small excess of weaving ever finds its way farther afield.

Nearer the larger centers, the peasants have a slightly higher standard of living; to them the rug, as well as being a home necessity, also provides a source of slight additional income, to eke out their meager existence. Their few surplus rugs, woven by members of the family not able to do the more strenuous work of the fields, are taken to the nearest village, and sold for a very small profit. From here, the dealer transports them to the recognized rug center of the district, hoping to acquire a slight profit in turn. Eventually these home-woven rugs reach the larger centers, and are sold to foreign tourists, or buyers, at an enormous profit, unless they are purchased en route by some Chinese who wishes to use them in his home. The number of these rugs reaching Peking or Tientsin is very small, the vast majority found in these cities being of factory origin. It seems only a question of time, and education, until the factories will usurp the realm of the home product, and eventually make it a thing of the past, at which time the home rugs existing will increase in value enormously. But for many years to come, the demand of home use will result in the weaving of a few more of the old-style rugs.

How vastly different from the simple life led by the peasant

rug makers is that of the factory! Of late, not a few of the home weavers have drifted into the atmosphere of the factory, forced to do so by economic necessity; here they have promptly lost their individuality, in the more standard procedures enveloping them.

A factory, as exemplified in Peking, Tientsin, or Kalgan, consists of a number of looms commensurate with the working capital of the owner. Since these are usually individuals, the capital is necessarily small, for the most part; the existence of the factory is indeed precarious, and in times of fluctuation it is not at all uncommon to have many failures, the owner then becoming the employee of a more prosperous owner, until such time as the situation changes. However, a few of the larger concerns, being more stable financially, own several factories; in addition they may control a number of others, through buying the entire output, or sub-letting orders. The large factories may cover several acres, for, to be complete, space must be included for the dyeing as well as for the weaving and finishing processes. In a few instances the spinning is also included, though most factories send the wool outside, to spinning women in their homes, for this purpose. In North China there is one large factory in which every step is done under a central control, from the washing of the raw wool, to exporting the finished product. This firm is even now contemplating the installation of a weaving machine, the most radical change to be considered in the industry.

The factory, upon first entrance, conveys the impression of disorder; the courtyard is littered with odds and ends of various kinds, including bales of wool, piles of colored wool, skeins of yarns drying, pickling jars, workers squatted on mats, and what not, for it is used for all purposes, from receiving room to shipping room. Through the air is borne a mysteriously per-

sistent "thud, thud," which appears to originate in the buildings, one-story affairs, which surround the yard. First impressions are incorrect, for it is discovered that there is orderly disorder, such as attends the manufacturing processes in their various phases. In one corner of the yard are the large cauldrons, in which the dyeing is done; in another corner are the large vats for treating the raw wool; at one side is a canvas canopy, under which men are enlarging designs, prior to transferring them to the warps. At the other end is an array of poles, from which skeins of dyed yarn are hanging, to be air dried. Adjacent to this region, men are unsnarling the dyed skeins, and winding the yarn into balls. In the low buildings surrounding the courtyard are placed the looms, from which the previously noticed "thud, thud" constantly emanates, as the weavers tamp home the weft threads. In another portion of these buildings is a large dining room, with a kitchen behind it, from which the usual Oriental odors may be detected. A third portion of the low-roofed structures forms the dormitories, if such they can be dignified. Near the center of the group are located the administrative offices, with the usual tea tables. A well, in the middle of the courtyard, completes the arrangements.

While varying in different factories, the general organization of the staff may be said to be as follows. In charge of the factory is a superintendent, who may or may not be a stockholder, but usually is. He dresses in the best of silks, and boasts the long sleeves which indicate he does no manual labor; his is a very responsible position, for he must see that everything moves smoothly. To share the responsibilities are several assistants. One is in charge of the spinning of the wool into yarn; a second, and a very important one, is in charge of the dyeing processes. A third assistant is responsible for the operation of the looms; a fourth, another important one, is the designer,

who enlarges the design to the actual size required, and sketches it upon the warp. He must see that every curve is properly made, and that the relations of the various parts of the design are as in the original. Under these assistants are various foremen, who supervise the actual work done in the various departments. Among the most important of these are the men who continually watch over the looms, to see that no mistake is made in the weaving.

This is done under anything but ideal conditions, except in a few factories. While in the home industry, the loom is out of doors, or in a large room, with plenty of ventilation, in the factory, several looms are crowded into one dark, poorly ventilated room, with just enough space between them to permit easy passage. In summer there is considerable light, coming through open windows, or lattice work, but in winter, with all windows closed, and all cracks sealed with paper, the only source of illumination is the door, when open, or artificial light. Before each loom sit several weavers, mostly small boys, maintaining their position hour after hour, the only break coming at meals, once in the mid-morning, and once about four o'clock in the afternoon. At these times they get rice, soup, raw vegetables, and other seasonable food; as a rare delicacy, meat may be added. Tea is furnished at irregular intervals, as well.

The apprentices, ranging from 8 years of age, are generally under contract for three years; they come from the poor families of the district. Most of the work is done by these apprentices, under skilled supervision, only special orders being executed by weavers of experience. The reason for this large number of apprentices in many shops, is that no salary is paid them, while a skilled worker has to be paid. The boys are under bond not to run away, and as long as they get food and lodging their parents seem satisfied. Usually the factory owner pays the par-

PLATE 9

DYEING SCENES

(*Upper left*) Dipping the wool skeins in acid solution.
(*Upper right*) Chief dyer standing beside a dyeing cauldron.
(*Center*) Corner of the courtyard devoted to dyeing processes.
(*Lower left*) The wool is watched carefully as it is being dyed.
(*Lower right*) If there is no room for a drying rack in the courtyard, the street will serve very well.

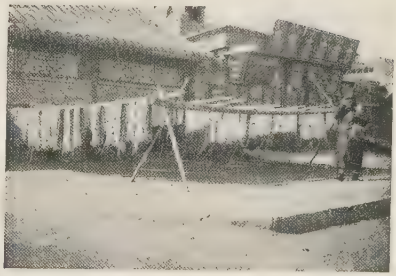


PLATE 9 DYEING SCENES

PLATE 10 RUGS OF THE TRANSITIONAL PERIOD

PLATE 10

RUGS OF THE TRANSITIONAL PERIOD

These pieces show a conglomerate design, and much faulty workmanship, often seen in the years of the Ch'ing decline through until the onset of the modern era. The middle rug, woven inland, shows more stability than the flanking pieces, and is a fair example of the period.

ents a small sum, when securing the boy. At the end of the apprenticeship, which in some ways is a useful thing, the boy is given a certificate, and a small salary, if he chooses to remain. As a rule, he soon leaves the scene of his apprentice days, and hires out for more wages, his certificate being his reference.

Though some factories take advantage of this child labor, it must be said to the credit of the most that they do not. There are several concerns which will not take apprentices, and even a few daring ones who have actually put the factory on a co-operative basis. Where this is the case, the owners claim the quality of the work is vastly superior to that made under former conditions.

Working conditions are far from satisfactory in anything but the larger factories. The looms are crowded together; the aisles are filled with wool clippings, and other rubbish, while the dirt floor, always dry swept, is a source of considerable dust. The weavers also find it a convenient place for expectoration, while in many factories their blankets are spread upon it to form their only bed. The hours, as a general rule, are from sunrise to sunset, these being extended in the darker months sufficiently to allow for the finishing of the demanded square foot per day per worker. Wages vary, upon completion of apprenticeship, from fifty cents a month, to as high as twenty dollars, depending upon skill, the average being about ten dollars; this varies from time to time in the different factories, fluctuating with living conditions.

A number of years ago, in Peking, an attempt was made to standardize the industry, as to wages and working conditions. A guild was organized, to govern the industry, but as it had no machinery for enforcing its regulations, it died a natural death. More recently, in Tientsin, a second venture of similar nature has been launched; it appears to be meeting with more

success than its predecessor, largely because of the coöperation of the various exporters and agents.

In spite of all the difficulties, a few factories are continually trying to better conditions, by shortening working hours, weaving fewer days per week, and paying better wages. Their efforts are not always received in like spirit. A few of the more daring, or commercial ones, are experimenting with a weaving machine, but as yet the increased cost, together with a few defects, have prevented its adoption. Of late years, due to the internal situation, the carpet manufacturers have found themselves considerably over-taxed, on various pretexts, but chiefly because they usually had easily convertible assets, and were easily reached. To avoid this, many abandoned the coast ports in favor of interior cities, preferring to pay a less tax on a finished product, than greater taxes on all the raw products entering into it. However, it was not long before the tax collectors devised new methods of approach, raising the *likin,* or interprovincial tax, and by resort to other measures, making the situation almost as bad as formerly. To combat this, the manufacturers agreed to cease exporting for a few weeks, or months, and if necessary, to cease manufacturing. All did not conform to the agreement, however, and the result has been a general stagnation in the industry. Notwithstanding all the handicaps, the future is bright, and economic progress is being maintained. The more progressive manufacturers are constantly striving to turn out a better product than formerly. As a part of this program, two large firms make it a policy to have some member of their staffs continually studying abroad, this opportunity being awarded partly on a basis of necessity, but also on merit. The result of this, they claim, is being manifested in the perfected quality of the rugs produced.

CHAPTER FOUR

THE WOOL

SINCE the quality of the finished product of the Chinese rug makers is dependent not only upon skilled workmanship and dyeing, but also, and directly, upon the nature and quality of the wool employed, a study of the industry is not complete without due consideration of the wool, and its preparation into forms suitable for carpet making.

In the final analysis, wool is modified hair; this is true both chemically and histologically. Each single fiber is elaborated by certain cells in the middle layer, or dermis, of the skin of the animal. These root cells, together with certain nourishing and protective glands, viz., sebaceous and sweat glands, form a group known as a hair follicle; there is one follicle to each hair.

The wool fibers, as seen under the microscope, have a diameter of from $\frac{1}{260}$ inch in the poorest kind, to $\frac{1}{2800}$ inch in the finest grades. They are seen to consist of three layers, an outer serrated scaly layer, a middle or cortical layer, and an innermost, or medullary layer often containing pigment granules, which lend to the wool its characteristic color. The scales, or serrations, may be as numerous as 2800 per inch, or as few as 800, the former occurring in the fine wool, and the latter in the poor quality. These scales are interesting in one other respect; they overlap much like the shingles on a roof, with the overlap directed toward the outer end. This fact gives an indication of their physiological purpose, that of shedding water, and constitutes a noteworthy link in the chain of evidence supporting the theory of evolution. The serrations yield an accurate means of determining the grade of wool in any lot, or rug.

Figure 2: Microscopical Appearance of Rug Fibers (Semi-diagrammatic). Here are shown the three commonest fibers found in rugs. The wool can be readily distinguished by the shingle-like appearance. (1) Jute (2) Wool (3) Cotton.

The sweat glands excrete salty waste products from the animal body; much of these chemical substances is enmeshed among the many fibers, and is therefore encountered in handling the raw wool. Incidentally the suint, as it is called in the trade abroad, may be recovered during the cleaning process, to furnish a valuable by-product.

The wool is also subjected to the action of material secreted from the sebaceous glands, an oil-like substance, but not a true member of the oil-fat family. This product lubricates the wool fibers in their rubbing against each other, as well as acting as a protective mechanism. It is composed largely of cholesterol, which tends to make the fibers more flexible and elastic. It, too, is recoverable as a by-product, later to find extensive use in the realm of medicine.

In addition to the above, the medullary portion of each

fiber is supplied with a true oil substance, incorporated into the substance of the fiber; this is the least disturbed substance in the various treatments. It is said to increase materially the resilience of the wool.

According to the length of the fibers, the wool is divided into three classes, long, medium, and short. For rug work, the long fibers are much to be preferred, and these command, when of good quality, an excellent price.

Mongolia, inhabited by nomadic bands, largely shepherds, constitutes the chief wool-raising district of China, and contributes to the rug industry the bulk of the wool used, so much so that in former times any surplus of Mongolian wool, available for export, was known to the international trade as rug wool. Though this is the chief source of the wool used, the adjacent provinces of Kansu, Suiyuan, Chahar, and Jehol also contribute their quota. Some of the finest wool is produced in Honan. More recently, wool raising has extended into other provinces, including Manchuria, so that now no one region of China may be said to have a monopoly on wool production.

Twice a year, or oftener, depending upon the demand, the buyer takes a trip through the big wool-raising districts beyond the Great Wall, often well into Mongolia, for the purpose of buying the best-grade wool, and getting it shipped to the factory. If he sees an exceptionally good piece of weaving, he may also include a few rugs in the shipment.

The winter clip is considered the best; other clips often find their way into cheaper markets. The Mongolians are experts at shearing and sorting the wool, the quality of which varies even on the same animal, as the length of the fiber, and its pliability; the wool from the head is least desirable. After the shearing, with or without washing, the wool is collected into bales, which are then brought to the railhead at Kalgan by that ancient mode

PLATE 11

FACTORY SCENES

(*Upper left*) One method of unsnarling the dyed wool.
(*Upper right*) A completed rug, held by a loom foreman. The other workman has been picking wool from the stacks in the courtyard, of the colors indicated by the miniature design held in his hand.
(Center) Drying racks in the courtyard. Sleeping quarters in the right background.
(*Lower left*) Another method of unsnarling the yarn.
(*Lower right*) An apprentice seated at his loom. Note the balls of yarn, and the tracing upon the harp-like warp strings. A portion of a round rug shows in the crook of the boy's elbow.

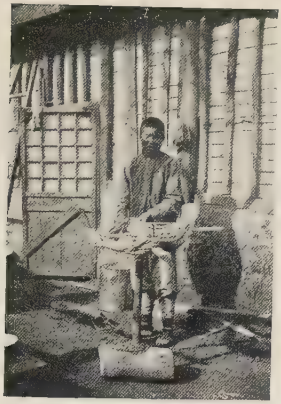


PLATE II FACTORY SCENES

PLATE 12 SEMI-ANTIQUE RUGS

PLATE 12

SEMI-ANTIQUE RUGS

These specimens were made in Ninghsia, that to the left during the period of the Ch'ing decline, and that on the right during the late years of the 19th century. They contain eighty knots to the foot, and both are in blue and white colors. The designs are an admixture of geometrical and biological.

of transportation, the camel caravan; here it is shipped to Peking by rail. Caravans carrying wool may number as high as five hundred camels. They maintain their slow, steady pace, day and night, traveling in single file; at night a single watchman, mounted on the leading camel, is the sole human awake, it being his duty to oversee the route taken, and alarm the others by firing a shot, should danger appear imminent. It is not infrequent to find a camel caravan which has brought nothing but wool to Kalgan, having picked up a few bales at many points in its long journey overland.

There is no standard grading system for wool, in China; each locality has its own standard of excellence, which may be totally different from that maintained a few miles away. This is very confusing, and many are the foreign buyers of rugs who have been deceived by a lack of knowledge on this matter; a first-grade wool in one point is quite possibly a third-grade wool in a center maintaining a higher standard.

In Peking, three general grades are recognized; even in this center, where the art is highly commercialized, with many attempts at standardization, the quality of the first-grade wool is far from constant. Grade one consists of pure wool, free from matted masses, spun in the best fashion; grade two contains a fairly large percentage of wool, but also a mild degree of adulteration, or it may be pure wool, but spun in an inferior manner; grade three may contain little or no wool, but may be spun from a mixture of hair, frequently from dogs and cattle. Wool made from the camel, goat, or yak, is rarely used in Peking, except in a very few of the smaller shops. A large concern, obtaining an order for a camel-wool rug, promptly sub-lets the order, instead of undertaking the weaving itself.

In the inland districts, as many as eight or ten grades of wool

may find use in weaving rugs. Typical grades are as follows, in use along the upper reaches of the Huang Ho:

(1) Sheep's wool, spun from combings from the best portions of the fleeces, sheared a couple of weeks after the spring equinox.

(2) Lambs' wool.

(3) Sheep's wool, spun from fall shearings.

(4) Sheep's wool, spun from head clippings, a very poor grade.

(5) A miscellaneous class, spun from the wool of the camel, donkey, horse, cow, goat, etc., with a very little sheep's wool mixed with it. This is the poorest quality, the hair used, in many instances, being recovered as a by-product from other industries, such as the manufacture of glue, leather goods, furs, etc. In these it has been subjected to rigorous treatment with chemicals, and consequently, it is not unusual to find portions of leather clinging to the hair, and included in the resulting yarn; this interferes greatly with the dyeing and weaving, resulting in an inferior product.

Another factor affecting the quality of the wool is the age at which it is sheared, extreme youth and old age being less satisfactory than the middle period. Going a step farther, wool from the unborn is certainly of the finest dimensions, while that sheared from the animal after death is held inferior to that clipped from the sheep during life. The latter kind is on the market more than might be supposed.

In the preparation of the wool for spinning into yarn, and more particularly in the dyeing, a knowledge of the chemical structure and behavior of wool is essential, for the fineness of the completed product depends upon the practical application

of that knowledge. Wool consists largely of protein substances known as keratins, which are complex organic compounds resulting from the combination of certain amino-acids, among these being the sulphur containing one known as cystine, a fact of considerable importance in the selection of suitable dyes. Chemically, as one might suppose, it is very similar to hair, horn, and finger-nails. It is practically neutral in its reactions, but has a slight tendency to act on the alkaline side under certain conditions. It is destroyed by strong mineral acids, and by hot weak alkalies; it is but little affected by weak acids, advantage of which is taken in dyeing. On the other hand, treatment with strong alkalies, while tending to remove the sulphur, and increasing the affinity for certain dye-stuffs, seriously alters the fiber structure, though it may add a slight luster to the wool. The alkaline treatment has been said to increase the strength of the fibers, but this is doubtful; in most instances the resisting powers of the wool are sadly impaired, as will be emphasized later. Finally, wool, while insoluble in water, is hygroscopic, *i. e.*, it will absorb a considerable quantity of water, without tending to liquefy, a fact which must be considered in the washing and drying processes.

Wool, in its natural state, is totally unsuited for the making of rugs. In China the raw wool is most often a matted, snarled, dirty, burr-infested mass; to prepare it for its finer industrial uses, an elaborate and lengthy treatment is first necessary. Fortunately, in the matter of rugs, a less elaborate process will result in a very beautiful product, in many cases, and full advantage of this has been taken in the past; the purification processes employed by the Chinese have been, and still are, relatively simple affairs. However, since a few weavers, in their desire to turn out a superior product, have either adopted the better methods of treating the wool, or have used foreign wool, pre-

pared by the same method, a detailed description of this method will not be amiss. The simpler home method, though it continues to have a large use, promises to be eliminated in the near future, at least as far as the large weaving plants are concerned.

Theoretically, both methods are applications of the same principles. The wool, following sorting into lots on a basis of length and quality, must first of all be washed, to remove gross dirt, and any sweat remnants enmeshed in it. Next, anything which will affect the dyeing must be eliminated, hence wool-fat must be removed. Finally, before dyeing, all extraneous vegetable matter, such as burrs, must be removed; if dyeing is delayed until after spinning, this step is most important.

The preliminary washing, being done with comparative ease, is rarely omitted, except in some distant parts of Mongolia, or other places where water is not to be had in large amounts. The nearest creek or pond, frequently quite muddy, is a frequent source of wash water; the sheep may be washed in this prior to shearing, or they may be sheared first, in which case the fleeces are washed in one of several ways. Ordinarily, the wool is placed in large baskets, and immersed a sufficient number of times. In other instances water is poured over the collected fleeces, until they are somewhat cleaner. By a third method, the wool is placed in large buckets, or jars, water is added, and the mass is twirled, beaten, or pounded, by means of a large stick, until it is cleansed; the dirty water is allowed to drain off, and is replaced by rinsing water. The treatment is repeated, following which the wool is removed, and exposed to the air to be dried. No attempt is made to recover the potassium and other salts carried off by the wash water.

Previously washed or not, the wool is next treated in various ways, to remove the wool-fat. Each district has its own choice method, though more and more the processes of the coastal

cities are coming into use. In some of the inland districts, the grease is cut by the use of goats' urine, which has stood until it is thoroughly ammoniacal; in some cases stale urine from other sources is added. Another method is that of immersing the wool in an emulsion prepared from a type of bean, and boiling the mixture; this results in the formation of a mild alkali, which in turn removes a portion of the fat clinging to the fibers, especially as the mass is pounded or stirred constantly. A third method, rarely employed, on account of the cost, is the treatment with a good quality of soap, purchased at the nearest city. The method of choice, however, is that calling for the use of a soft soap, prepared from a homemade potash solution.

Throughout the year, all the ashes from wood, and to a less extent from vegetable roots, and grasses, are collected in a specially constructed basket, of the same diameter throughout. This is lined with leaves, weeds, or grass, to prevent the ashes from falling out at the sides. The ashes are added from time to time, are pressed down, and repeatedly pounded as well, to form a very compact mass. When one receptacle is filled, it is set aside, and another is begun; if local consumption of wood is insufficient to supply the needs, the nearest neighbor who does not work in wool adds his ash supply to the total. When wool treating time approaches, or a supply of potash is needed for other home purposes, all the collected baskets are taken into an open space, and set on crude stands, over an empty pan-like receptacle. Water, to the proper amount, is then poured over the ashes, and allowed to trickle through, into the pans below; if the ash is of poor grade, or is insufficiently packed, so as to result in a weak solution of potash, the solution obtained may be poured through another, or several, baskets of ashes. The strength of the resulting fluid is tested by a crude hydrometer, a hen's egg. If the egg sinks, the solution is too weak; if it floats

at a certain level, the fluid is of the desired potency. It is then stored in glass vessels, until it is used.

When ready, the wool is placed in large vessels, as with the other methods, and is stirred and pounded until the caustic soap solution has loosened, and converted all the grease into a soapy substance, which is soluble in the watery solution, and is thus carried off in it. It is exceedingly important that the wool should be left in contact with the potash soap solution only long enough to have the fatty substances saponified; prolonged exposure weakens the fibers. Hence, at the proper moment, the caustic solution is poured off, and the wool is rapidly rinsed with the softest water available. Even in inland portions of China, though the people do not know that hard water contains salts of calcium, etc., they do know that it is the most unsuitable for wool treating, and it is avoided if at all possible. Even with this rigorous treatment, it is often found that much of the alkali has not been removed—nor the grease—and this results in an inferior wool.

Following this crude scouring, the wool is dried in the sun, by the simple expedient of spreading it upon a matting, laid upon the ground, and turning it over from time to time. Following this it is weighed; enough is set aside for home use, and the surplus is sold. If none is to be used in the home, the scouring is often omitted, though the price brought is less than if the wool is treated. In the home, following scouring, no additional treatment precedes the dyeing.

The alkali scouring of wool, while effective in removing the undesirable grease, is a delicate process, one which must be elaborately observed to produce best results. The strength of the solution used, the time of exposure, the hardness of the water, the temperature of the mixture, and the thoroughness of the rinsing must all be rigidly controlled. Since all these fac-

PLATE 13

MODERN PEKING RUG

One of the celebrated Peking rugs, with raised and "carved" figures. This rug is six by two and one-half feet, with one hundred threads to the foot. The ground color is taupe, with the clouds in blue, and the figures in various colors, as indicated. The eight Taoistic genii and the eight emblems of augury form the motives. Seated upon a crane is the god of Longevity.

PLATE 13 MODERN PEKING RUG

Courtesy of the Metropolitan Museum of Art, New York

PLATE 14 CH'IEN LUNG SYMBOL RUG

PLATE 14

CH'IEN LUNG SYMBOL RUG

The field is cream color, with patterns in two shades of yellow and blue. It is approximately seven by four feet in size, and has 86 knots per linear foot. The central figures are the four attributes of the Literati, while other figures in the ground are selected from the Hundred Antiques. The inner border is a geometrical pattern, while a conventionalized lotus forms the outer one, with a plain edge band of indigo.

tors exert an influence upon the product resulting, it is not surprising that the results obtained by the same individuals are not always constant. This may fail to manifest itself until the stage of dyeing, at which time it may appear as streaks in the dyed product. It is to avoid this that the wool is very frequently dyed before it is spun.

In some of the larger plants now, and probably in most of them before many years elapse, the refined process of scouring is employed. The process is similar to that seen in the home, but it is much more carefully controlled. The wool, when received, be it raw or washed, is subjected to a preliminary washing, and, while still wet, is transferred to the scouring mixture, where the grease is removed. This mixture is usually a soap of potash or other alkali, with an excess of the alkali present. The water used is soft, the temperature is maintained at an optimum level throughout the mixture, and the length of exposure is scientifically calculated, with all factors considered; the wool is agitated by machinery. By an ingenious device, the alkaline scouring fluid is withdrawn, fresh rinse water is run in, without removing the wool, and it is very thoroughly rinsed. From this point the home and factory processes are quite different.

The home worker is satisfied with a perfunctory washing; the factory demands that all traces of the chemicals employed must be removed, a very important step, which must be accomplished while the wool is wet. If any traces of alkali remain in the wool after it is dry, they are very difficult to remove, and later will interfere with dyeing, especially if metallic mordants are used, in which case they form insoluble metallic soaps, which in turn make the dyeing streaky or patchy.

The wool is next carbonized, or treated with a dilute solution of sulphuric acid, for the purpose of decomposing any vegetable matter present. The acid solution is then removed, and

once more the wool is thoroughly washed, first in a mild alkali, to remove all traces of acid, and then in successive changes of water, to remove the alkali.

Following carbonization the wool is dried, and by a mechanical device, the vegetable particles converted into charred pieces by the acid are shaken out. Drying is much accelerated by the use of fans, and currents of warm air, of even temperature. In most factories, however, the vegetable particles are left to be eliminated during the spinning, while the wool is still allowed to dry by exposure to the sunlight.

None of the other methods for removing the grease, as used in Europe and America, is utilized in China to any extent. An enterprising son of a small rug maker, having returned from an educational sojourn abroad, attempted to induce his father to introduce the new fat-solvent method, using gasoline. While an experimental lot of wool was being treated in this fashion in the courtyard, an admiring neighbor approached, wishing to satisfy his curiosity along with the rest of the onlookers. Unfortunately, he attempted to knock the ashes from the metal bowl of his pipe, using the stone upon which the bowl of scouring mixture was resting, with a resulting unexpected spark, and the end of the experiment. Father and son, while growing new eyebrows, decided to abide by the methods of their forefathers.

When the wool has dried sufficiently, it is ready for combing. This is done by machinery in the larger plants, or the wool is sent out to be combed and spun, returning as yarn. The combing machinery in the home industry is very similar to that in most factories, and is very crude (a modern spinning plant in Tientsin is an exception). By one method, a number of spikes are driven through a board at close intervals, and the wool is drawn over these projections, by hand, time after time, until it is fine enough for spinning. A second method consists of a

large bow, which is suspended from an overhanging limb, or the ceiling, or other convenient object, in such a manner as to have the thong just within reach of the mass of wool, which lies on a table. The bow is at right angles to the long axis of the table, and projects several feet beyond its edge. The table is covered with a matting, which extends to the ground, to receive the wool as it falls from the table during combing. The operator either pounds the thong with a mallet, or "picks" it with a short stick, in very rapid succession, to beat a staccato tattoo, thus causing the bow-string to vibrate rapidly, and beat out the entanglements of the wool. With the other hand he moves the bow toward the wool, until the whole mass is loosened, and falls to the ground. The process is repeated until the desired fineness is obtained. Very occasionally, by a third method, the wool is chopped into small pieces; this is falling into disuse, for it injures the fibers, and produces a weaker wool. The combed wool is collected, and later spun.

Spinning is done in three ways. The Mongolian shepherds, while tending their flocks, frequently carry a small spindle and distaff, spinning as they watch; this yarn is highly prized. In the neighboring villages, the old men and women, while going about their daily tasks, or idling, also carry hand spindles, and aid in the general output of yarn. In other places, crude spinning-wheels are employed, the yarn being made in the orthodox fashion. Recently, the first modern spinning plant was built in North China, and following this, smaller plants have been established in various cities. The number of these is increasing steadily, as the weavers realize the advantage of a standard quality of yarn.

Long-fibered wool is considered the best for rug making; it is made into fine yarn of few strands; if a larger knot is desired, the yarn is doubled or trebled. Machine-spun yarn is superior to

the hand-spun variety in that it is devoid of lumps, so troublesome to the dyer; it is stronger, more even in texture, produces a better dyed result, and withstands better the severe chemical wash used so much to-day. It is but a question of time until machine-made yarn will entirely replace much of the hand-spun variety, in the better factories, although the hand-spun product will undoubtedly persist for some years, in the beautiful rugs manufactured in the inland districts.

CHAPTER FIVE

DYES AND DYEING

PROBABLY the most important phase of the manufacturing process is that concerned with the dyeing. This is emphasized when it is remembered that the chief charms of the Chinese carpets are not only their elaborately executed designs, but also their wealth and richness of color combinations, the latter alone lending permanence to the former. As well as being the most important phase of the manufacturing process, dyeing becomes at the same time the most technical; as such it calls for the skillful experience of the carefully trained expert, who is well versed in the knowledge of the chemical composition and behavior of both the wool, and the dyes with which he colors it.

To the layman, who knows vaguely that there are several hundred dyes, it seems a simple matter to produce the gorgeous color schemes seen in the rugs; little does he realize the tremendous amount of training, thought, and careful observation which underlies the result he admires so greatly. Although the number of dyes known with recent chemical advances, must be in the thousands, it is surprisingly few which can be applied to wool, with the results desired by the rug makers. Some dyes are almost perfectly ideal in this respect, but they are few indeed; it is the constant aim of every reliable dyer in the industry, to utilize dyes which will approach most nearly to the ideal demanded. In a general way, dyes must first of all be reliable, in that their chemical behavior is stable, and they must be reasonably cheap. They must be permanent, or fast, in their resistance to light; in addition, they must resist the action of acids, alkalies, soaps, water, and the gases of the atmosphere, especially in the cities; finally, they must resist wear. Of these criteria, fastness to light is considered the chief test of desira-

PLATE 15

GEOMETRICAL RUGS OF K'ANG HSI

(*Upper*) This piece, consisting entirely of geometrical motives and conventionalized dragons, was woven in the reign of K'ang Hsi. It is six by four feet in dimensions, and has a knot count of 90. The *yin yang* form in the medallion is maintained. Colors are shades of blue, upon a tan ground.

(*Lower*) A K'ang Hsi rug, showing the multiple geometrical borders, and conventionalized and medallioned ground. It contains 80 knots per foot, and is woven in yellow and blue tones, yellow forming the basal color. It was woven in its wide dimension.

PLATE 15 GEOMETRICAL RUGS OF K'ANG HSI

Courtesy, Director, Victoria and Albert Museum, London

PLATE 16 YUNG CHENG RUG

PLATE 16

YUNG CHENG RUG

This rug is attributed to the 18th century, but it seems as reasonable to suppose that it was woven in the early half of this era, as the characteristics have a greater tendency toward the weaving of K'ang Hsi than of Ch'ien Lung. As with many K'ang Hsi rugs, it is woven in its short dimension, and the arrangement follows as well. The medallions, however, point in the direction of Ch'ien Lung, yet the colors, and other details stamp it of the school of Yung Cheng, intermediate.

It is six feet two inches by eight feet five inches, and is woven of blue, brown, and yellow colors, upon toned white. The browns were probably originally reds. Note the geometrical borders, similar to those shown in Plate 15, and the ground filled with conventionalized floral motives, together with selections from the Hundred Antiques. There are 80 knots per foot.

bility. The results obtained depend not only upon the nature of the dye used, but also upon the manner of its application, the temperature of the solution, and its composition, as mentioned below.

Upon the manner of application, dyes may be divided into two large groups. In the first are those which dye directly, without any additional treatment; these are known as direct, or substantive, dyes, of which indigo is a good example. In the second group are those which will dye only after they or the wool have been subjected to chemical manipulation; these are known as indirect, adjective, or mordanted dyes, an example being alizarin. The substances used to alter the dye, or wool, are known as mordants; these consist chiefly of the salts of heavy metals, or various organic compounds.

Upon origin, the dyes which are, or have been, used in the rugs, may be divided into three classes, viz., vegetable, mineral, and coal-tar or synthetic. In addition a few dyes of animal origin might be mentioned, but their use proved so limited that they will not be considered. The chief classes will be dealt with later.

Explaining the dyeing phenomenon are three fundamental theories. The first of these claims that dyeing is essentially a mechanical process, in that the wool fibers contain pores, or spaces among the component cells, into which the dye-stuff enters and is entrapped, the degree of penetration determining the depth of color obtained. The exponents of the second theory maintain that the color retention is the direct result of a chemical union between the substances in the dye solution, and the constituents of the fibers. Advocates of the third, or colloidal theory, claim that the dye must form a colloidal solution, and as such, enter the colloid material composing the fiber. There are elements of truth in all three theories, but most workers are

agreed that the chemical explanation is most likely, when viewed in the light of behavior of the various dyes during the application, and subsequently.

Based upon the types of dyes used, Chinese rug making may be divided into three periods, viz., vegetable colors, aniline colors, and the present period of so-called chrome colors. Though many mineral dyes were known to the Chinese in ages past, there is no record of any of them having been used in the rug industry; they were somewhat corrosive, and found their chief application as pigments. These mineral colors can be applied to wool only with great difficulty, so it is not surprising that the industry discarded them in favor of the more easily obtained, and manipulated, vegetable dyes.

The period of vegetable dyes dates back to the early origin of rugs; there is little doubt that these dyes were employed by the Chinese in their ceramic and textile industries, well before there is any accurate record of their use. Certainly they had been in use for several decades prior to the journeys of Marco Polo's visit, though even at this time there was but a limited range of colors employed. This was no doubt occasioned by the scarcity of dye-stuffs, and difficulties of transportation, as well as by tradition.

The Chinese palette, then as now, was noted for brilliance, rather than for variety of tones, the colors used rarely exceeding five in number, usually a combination of black, blue, red, white, and yellow, the five sacred colors * of the Chinese. Intermediate colors, such as green, purple, or orange, were rarely or never found.

* As an illustration of the tenacity with which even modern China clings to the ancient things, it is interesting to note that the Republican flag now displaced by the Nationalist emblem consisted of these same five colors, each color representing one of the component five tribes, as follows: Red, the Chinese proper; Yellow, Manchus; Blue, Mongols; White, Mohammedans, and Black, Tibetans.

The dyes, as their class name indicates, were derived from the vegetable kingdom, from shrubs, flowers, plants and trees. Many sources of supply were utilized, but through usage, and failure to meet the requirements demanded even in those early times, many of these were eliminated, until but a few reliable ones remained. Some of the principal sources are those given herewith.

Black, long considered the color of light mourning among the Chinese, was found chiefly in nut-galls, *galla sinensis,* which occurred on various species of *rhus;* the dye consisted of digallic acid, combined with iron, much like our inks of the present day. The digallic acid was extracted by crushing, and steeping the nut-galls in water and vinegar.

Blue, the Chinese omnipresent color, the color of medium mourning, was invariably obtained by the vat treatment of any of the innumerable species of the *indigofera* genus, found throughout China. The extract consisted of indigotin and indican, in obtaining which the home-prepared potash solution previously described found an extensive application.

Red, the color of joy, and as such found widely distributed among all forms of Chinese art, was extracted from madder, and allied roots, *rubia tinctorum* or *cordifolia,* by the usual steeping and beating process; the active ingredients were chiefly alizarin and purpurin.

White, the color of deepest mourning, was obtained by an absence of dye, plus bleaching by sunlight, or other primitive means, with or without a previous rubbing with the soapy husks of *gleditschia sinensis.*

Yellow, in Manchu times the color of Imperial favor, was derived for the most part from various species of sumac trees, *rhus succedaneum* being the chief. The leaves and twigs were extracted, as well as the wood, to obtain the active principle, a

derivative of gallotannic acid. *Sopora japonica* also provided a reliable source.

Tints of these colors were obtained by the simple expedient of diluting the dye-stuff. On the rare occasions when intermediate colors were desired, the necessary substances were mixed, though occasionally one was superimposed upon the other. It is not surprising, in light of chemical knowledge, that satisfactory results were not always obtained by these methods; this no doubt aided in maintaining the tradition of the five standard colors, among the intensely superstitious Chinese.

As has been noted above, the vegetable dyes were obtained from plants growing in the courtyard, the neighboring fields, or afar, by extraction with water. The water extracted not only the dye-stuff, but also any other water-soluble substances present. As these varied in different representatives of the same plant, it is not surprising that the extracted dye could not be considered standard in its dyeing action, and it was in this connection that the experience of the dyer played such an important rôle; matching was very difficult. It was therefore customary to test out the dyeing power in advance; with the knowledge gained by this as a guide, the dye was placed in large vessels, and dissolved until the desired tone was reached. The skeins of wool were then dipped by hand, wrung out, rinsed to remove excess dye clinging to the surface (omitted in some instances), and hung in the air to dry. All the dyes used were necessarily direct in their manner of action, though alum was considerably employed, as a fixing agent.

Vegetable dyes were used almost exclusively until early in the present century, at which time the wave of enthusiasm in favor of the new aniline dyes reached China, thanks to the return of Chinese who had studied in Germany, and other western countries. At first there was considerable difficulty in persuading

the rug makers to adopt these dyes, for they did not understand them. However, when it was pointed out that the new dyes were infinitely more easily handled—and much cheaper—all hesitancy vanished, and aniline dyes became the product of the day. Spurred on by the hope of increased profits, through a greater range of color tones, maker after maker launched into the use of aniline dyes, in most instances entirely ignorant of their fundamental chemistry, and the fact that the first dyes synthesized from coal-tar were intended solely for cotton materials. Very unsatisfactory results followed, in using aniline dyes alone, and resulted in the production of very inferior carpets. A few of the weavers soon returned to the vegetable dyes, but the majority of them, on account of the cheapness of the synthetic dyes, compromised by using some of each type, together, as well as separately, with results somewhat improved, but still lower than the former standard attained. Reluctant to give up the extra profits, the majority of makers continued to wander in the maze; what might have been the outcome is difficult to say. At any rate, they were rescued from their undesirable position by a series of, to them, fortunate circumstances, and a modern period of dyeing permanence was firmly established.

Among the first of these ranked the new and more complete knowledge of the synthetic dyes, gained from the investigations of German and other scientists. These efforts were three-fold; the known dyes were purified, or simplified; new dyes, more suitable for wool dyeing, were discovered; better methods of application were evolved for both types, though this increased the cost of dyeing considerably.

To offset this increased cost came the large orders from the American market, transferred from Near Eastern countries because of the war raging in Europe. This opportunity, more than

anything else, proved to be the salvation of the new dyes, for as a result of the magnitude of the orders placed, at the increased prices prevailing, enough profit was made to more than take care of the extra cost of improved dyeing; it was but a short time until carpets resumed the former high quality.

During the transitional period, still persisting in the minds of many not fully informed, dogma reigned supreme. When aniline dyes were first talked of, they were barely mentioned, save with sneers, for, it was pointed out, had not carpets made centuries before with natural colors retained their full brilliance in spite of time, and could not the carpets be boiled to shreds, without affecting the dye? When aniline dyes became the ruling factor, to mention vegetable dyes was to confess being behind the times; products in which vegetable dyes admittedly were used, were very difficult to sell. This is, unfortunately, the case to-day, with many purchasers, but it is incorrectly so, for many of the old vegetable dyes employed were nothing but the naturally occurring aniline dyes. Thus, the vegetable indigo, obtained by the vat treatment of plants, is identical with that prepared by synthesis, just as in the realm of drugs, natural oil of wintergreen is the identical substance, in every respect, with the synthetic oil, known by its chemical name of methyl salicylate; similarly, the product of the extraction of the madder was natural alizarin. Other examples could also be cited.

To a careful observer, it is apparent that the age of the synthetic dyes is here to stay, in spite of the slightly increased cost of application. The results obtained, with a careful selection of dyes, are as good as, if not better than, the results formerly achieved by the cruder vegetable dyes; the reason for this lies not in any peculiar chemical composition of the dyes, but it is chiefly in a better knowledge of their structural behavior under

PLATE 17

TIENTSIN RUG

This shows the characteristic off-balance frequently found in the modern rugs manufactured in Tientsin. It is a mixed floral design with a strong Western influence. The colors are yellow, blue, and rose, the former becoming a gold when washed with chemicals. It contains 80 knots to the foot.

PLATE 17 TIENTSIN RUG

Courtesy of H. J. Fei

PLATE 18 CH'IEN LUNG SILK RUG

PLATE 18

CH'IEN LUNG SILK RUG

This rug was woven by Emperor Ch'ien Lung's orders, to be given to a faithful official, in charge of the palace at Jehol. In recent years it has traveled in and out of Peking a great deal, with the vicissitudes of the time, but always in the family of descendants of the original owner, a Manchu prince. It is an excellent example of the weaving at the height of the Ch'ien Lung period, showing the highly ornate compact design, with double border and guard patterns. Conventionalized lotus and peony flowers furnish the main ground theme, while dragons furnish the medallion and corner designs. Here the warp is of gold thread, the dragons being in blue. The rug is of silk pile, with cotton warp. Flowers are in white, upon a yellow ground. The only red in the whole rug is found in the tongues of the five dragons. Into the upper end of the web, has been woven in gold characters the name of the original owner of the rug. Size 8 by 10 feet with 90 threads to the linear foot.

the various modes of applying them. Some makers still utilize the natural dyes but their method of dyeing has been altered, so that actually there is no difference in the permanence of the product resulting, from that obtained by the use of similar methods upon the synthetic dyes.

The synthetic dyes, as far as they are applied to wool, may be divided into three classes, upon a basis of chemical reaction, viz., basic, neutral, acidic. Actually, the distinction is less sharp, for many of them are convertible the one into the other. Too, some dye without mordants, while others require special treatment, including fixing.

Strictly speaking, the basic dyes, such as magenta, unite directly with the wool, which acts as an acid. However, when dyed this way, the colors are fugitive to light, and resist soap, water, and chemical washing, etc., rather poorly. Therefore, they are not used as such, but advantage is taken of the fact that under treatment with sulphuric acid they can be easily converted into acid dyes, which are quite fast to light.

The miscellaneous neutral dyes, such as aniline black, are now seldom dyed directly, but are also subjected to acidification, in the course of their application, or they are mordanted, as alizarin.

The acid dyes constitute by far the largest portion of the synthetic colors used. They are, chemically, nitro-compounds, azo-compounds, or sulphonated basic colors. Included among these are certain dyes which must be treated with derivatives of chromic acid in the dyeing process. These acid colors are ideal for wool dyeing in almost every respect, through their simplicity of handling, fastness to light, and general resistance. When mordanted with chromic acid or chromic salts, these qualities are increased, making them highly desirable, but without this treatment, they are no better than the others. In view

of this increasing use of derivatives of chromic acid in the dyeing processes, both as mordants and as fixers, or developers, the whole class has become technically known as "chrome" dyes.

How is the dyeing accomplished? The color substance, whether of natural or synthetic origin, upon arrival at the factory is first subjected to a color test, or test dyeing, so that proper shades may later be obtained with ease, when the dye is dissolved for quantity dyeing. Any impurities are noted, so that they can be counteracted at the proper time.

When the dyeing occasion arrives, the dye, usually in the form of a powder or liquid, is dissolved in water in a large cast-iron vat, which is heated from below by a fire, or steam pipes. Both the dye and the water are accurately measured, to give the desired tint. If the dye is a direct-acting one, the preparation ceases, unless an acid reaction is desired, in which case enough of the acid substance to produce the required condition is added.

The wool is then placed in the warm solution, and the temperature is raised to the optimum degree for the particular dye used. After several minutes, to an hour or so, the wool, usually in skeins, is removed from the dyeing solution, and is washed free of surplus dye by a quick immersion in warm water, acidified if necessary. It is then wrung out by hand, and taken to the drying racks, to be air-dried.

If the dye is not a direct-acting one, and the majority of those employed to-day are not, additional treatment is required. Depending upon the dye, this may be done in several ways, but the chief alternative used is potassium bichromate, or its allies.

The mordant-fixing fluid may be made up in a separate vat, and the wool may be immersed in this for a few minutes, or for several hours. At the optimum point (and here the per-

sonal equation, represented by the dyer's experience, plays an important part) the wool is removed, and immersed in the dyeing solution, as mentioned above. Frequently it is desirable to have the alterative act with the dye, in which case both substances are dissolved together, and the wool soaked for the required time, washed, and dried, as before. In still other instances, it is preferred to have the dyeing done first, and the wool placed in the secondary fluid afterward. This is especially true in the fixation of the "chrome" colors, with certain manufacturers.

The splendid results obtained by those rug makers who intelligently apply the principles as summarized here, varying the procedure as the dye used, are very gratifying, and more than compensate for the extra labor and care necessitated in manipulating the wool through the various dyeing stages.

CHAPTER SIX

DESIGNS AND DESIGNING

THE designs met with in Chinese carpets of modern times are so variable as to constitute sufficient material for a separate volume, if one would treat all phases of them. Yet until a few years ago, nothing was less variable. The quality of the wool, the dyeing, and the workmanship might all change, but the designs seldom; these were very stable, being handed down for centuries. As reasons for this solidarity in the matter of designs may be given the fact that the workers were not sufficiently skilled, nor had they the stimulus, to produce new or different designs. Too, they were governed by the general attribute of respect for the past, and therefore hesitated to incur wrath by overstepping traditions. In one respect this was an excellent thing, in that it has preserved to our day, in a living art, the ancient designs of the Chinese rug makers.

In the past, the number of designs were very limited, being governed by the number of designs committed to memory by the weavers. No attempt was ever made to draw the design in miniature, in advance, as is the case to-day. The pattern, if insufficiently remembered, was sketched crudely upon the homemade warp, by the nearest neighbor who did remember it, and the weaving progressed accordingly. To-day, especially since the injection of western ideas into the designs, their number is legion, and the process of designing has become a very distinct and necessary phase of the rug-making technique.

The designs in use to-day are heritages of the past, being copied from older designs of pottery and temple decorations, or they are truly original. Many of the designs can be traced back for several centuries. To-day, regardless of origin, before

weaving, a crude design is first sketched on rough drawing paper, and from this crude design is made, with mathematical precision, an accurate drawing, upon transparent paper, black ink being used. The transparent paper is then turned over, and upon the back is carefully traced each line and mark of the design, in either white or blue chalk ink, which when dried leaves a chalk drawing, in reverse order, of the original black-ink drawing.

While this has been taking place, another integral phase of the design has been taken care of by the same or a different worker. This consists in placing the groundwork of colors on the sheet of fine drawing paper, which is to form the finished design. From this basic background will stand out the final colors. Usually several tones are embodied in one groundwork, for borders and main body; it is the practice to prepare several copies of the design, different from each other in color combinations and tones. The pigment used for this work is that employed in water-colors, mixed with enough chalk, or other color, to obtain the shade desired. With this is embodied enough of a mucilaginous substance to cause the pigment to adhere to the drawing paper firmly.

When the groundwork colors have dried to the proper degree, the previously prepared chalk-negative of the desired design is placed over them, and pressure is applied, sufficient to cause a portion of the chalk to adhere to the groundwork. This is repeated as often as there are different color grounds desired. The result is a rough transference of the design, in white or blue chalk, depending upon the tones of the base, to the color background. This chalk transfer is next gone over, extremely carefully, with the required colors, until the design is filled in and finished. As before, to cause the pigments

to adhere, and form a homogeneous mass, the color mixtures used are mucilaginous ones.

To complete the design, it is the custom to coat the drawing with a very thin layer of shellac, or other protective substance, to prevent the colored product being spoiled in handling. One finished design, of each color combination, is then ready for the permanent book of designs, while their duplicates are filed away, against the time when they will be sent to the looms to serve as guides to the weavers. In color combinations, pattern, and proportions, these small drawings are replicas of the rugs they are intended to represent.

In the matter of designs, there are three historical periods in Chinese rug making. These periods may be roughly designated as the Dynastic or Monarchical, the Republic or Transitional, and the Western, or foreign-influence.

In the dynastic era, the designs utilized were confined largely to the everyday life of the people, their mythology, their folk-lore, or their ethico-religious beliefs. The majority of these, with little change, have come down to the present day, in both weaving and porcelain, thanks to the Chinese racial characteristic of veneration. In addition to these simple designs, there were a smaller number of special ones, limited in their use through association with the ruling house, or sacred to state ceremonials. As an instance of this, the Imperial dragon, the dragon of dragons in the Celestial Empire, was always shown in yellow, and had five claws, whereas other dragons, of lesser rank, had fewer claws, and were of different hues.

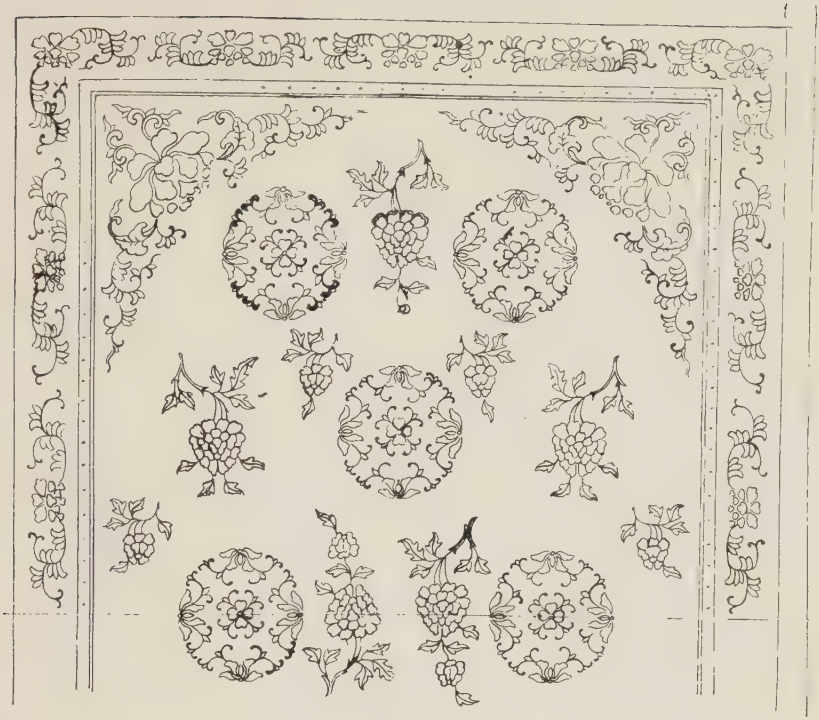
With the overthrow of the Ch'ing dynasty in 1912, in keeping with the spirit of the time, things Imperial, and to a less degree, traditions, went toward the discard. Where formerly the ordinary citizen could have a dragon with but three claws,

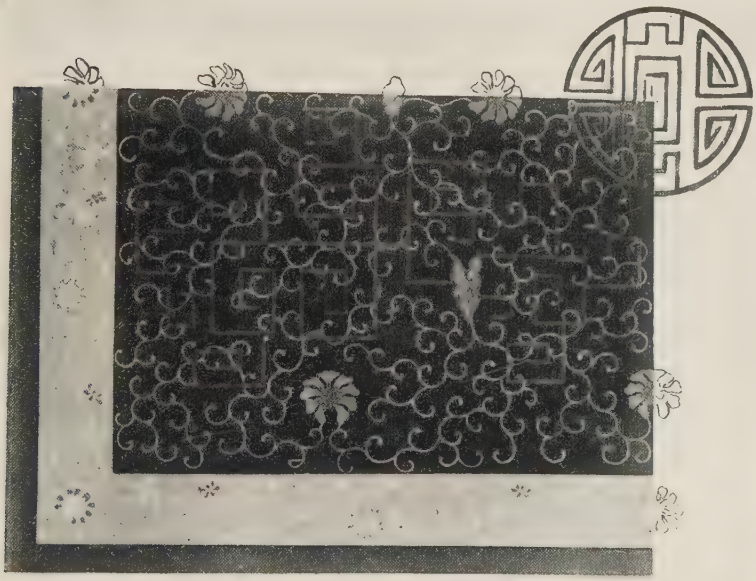
PLATE 19

DESIGN MINIATURES

(*Above*) One of the actual sheets of transparent paper used in transferring the design.

(*Below*) The finished miniature, showing the sketched design extending beyond the color ground.





Courtesy of the Jen Li Company

PLATE 19 DESIGN MINIATURES

PLATE 20 PAOTOW RUG

PLATE 20

PAOTOW RUG

This is a fine example of Paotow weaving, the picture presented taking the name of the "Pink Phoenix" from the central foreground figure. The photograph does not do justice to the exquisite shading displayed, nor to the colors shown, which are red, green, blue, black, and yellow, with white where indicated. This rug is approximately eight by twelve, and contains 120 threads to the foot.

it now became possible for him to acquire a *lung* with five claws. Since the founding of the republic, this dragon, together with other former Imperial insignia, have become the property of the ordinary rug maker. As was to be expected in such reactionary times, the pendulum swung to the extreme, and it was a rare rug which did not contain at least one of the forbidden symbols. Of late, the novelty has worn off, and the old designs again predominate, with considerable admixture of the new. In addition to this, an outside force began to make itself felt in the designs, with the result that rugs underwent further changes.

With the revolution came a desire on the part of the Chinese to absorb the good from western civilization; their students went abroad in increasing numbers. Before the revolution was firmly established, the world war forced the rug dealers of the west to turn to China. These two circumstances introduced the western influence into the field of designing. Returning students tried to transmit their impressions of foreign art; foreigners in China persuaded some of the Chinese to use designs and color tones which appealed to foreign taste. In the confusion which followed, many experiments resulted in weirdly designed rugs, alleged to be the product of foreign influence upon Chinese designs. In most instances, the attempts were failures, as was to be expected from the effect of trying to exert the westerner's bizarre ideas of Chinese art and symbolism upon the stable Chinese weavers. However, out of the chaos, there emerged, thanks to the efforts of a few western nationals who understood the Chinese better than their brothers, a style of rug combining the best elements of the Western and Chinese designs into a harmoniously blended whole, typical of the New Age in China. In the past the Chinese have frequently borrowed from their neighbors in the matter of

designs. It will be interesting to watch if this latest addition will eventually be incorporated into a Chinese motive, the origin of which will be very much in the background, as has been the case with Persian, Indian, Mohammedan and other contributions from the outer world.

CHAPTER SEVEN

SYMBOLISM

With all the excess current in the field of designs to-day, the typical Chinese rug still remains, thanks to the conventionality of Chinese figures throughout the various branches of their art. To the Oriental races in general, symbolism is a field peculiarly their own; the Chinese are no exception to this. Their whole past, and their present manner of living, tends to maintain intact their elaborate system of forces affecting human life and existence. While the modern Chinese are trying to remove much of the superstition, the habits of centuries cannot be eradicated in a few years, and symbolism still reigns supreme, though with certain modifications of a minor nature.

While the westerner takes pride in showing every detail in its full reality, the Chinese, like other easterners, prefer to indicate rather than elucidate, leaving the interpretation of their work to the soul of the interpreter, as they themselves have included much of their mental processes into the woven designs. As a result, their carpets may be considered sketches, rather than photographs, hence a proper understanding of their weaving art is impossible without a knowledge of their elaborate symbolism.

This symbolism, like Chinese civilization, is of indefinite origin; undoubtedly it developed long before there is accurate record of the nation. It has come down to us veritably intact, and to-day, in a general way, is known to the great mass of Chinese, as well as to their scholars, though the latter group have a more profound knowledge of the subject. Having origin with the evolution of fear, religion, and other attributes of their daily life, this symbolism may be said to be associated

with all phases of their existence, social, moral and ethical, to a less degree than formerly, but still quite noticeable.

Symbols prevalent to-day may be divided into three main classes, Utilistic, Biological, and Mytho-religious. The division is purely arbitrary, for ease in consideration; as a matter of fact, all symbols are much inter-related, being thoroughly incorporated into the great system of Ancestral Worship, which is much too involved to receive more than scanty mention in these pages. To simplify matters, a classification upon a basis of structure and application has seemed advisable. Many of the symbols, occurring singly, have different interpretations than when found in groups. Certain symbols are usually found associated almost constantly, though not invariably. For instance, the dragon rarely appears without a pearl in close approximation, the bat rarely without a peach, and the phœnix rarely without a peony.

The Utilitistic designs are further divided into three general groups, viz., geometrical, character, and physical. The biological designs fall into the natural subdivisions of botanical and zoölogical. The mytho-religious motives are subdivided into Taoistic, Buddhistic and Geomancic groups. The component members of each grouping will be considered in detail.

The geometric designs are undoubtedly the oldest symbols known to mankind, consisting as they do of straight lines and circles. The origin of these cannot be established, but there is good reason to believe many of them took root among the people who first inhabited Central Asia, and the Mongolian plateau. There is no particular symbolism to be attached to straight lines, other than the indication of perfection; the same may be said of the circles. Perhaps they are relics of early attempts at written language. In any event, it is well established that it was to avoid this implication of perfection on

the part of mankind, that many of the ancient weavers failed to make all lines exactly straight, and all circles truly round, though it must be admitted that faulty workmanship undoubtedly played some rôle in the production of these interesting discrepancies.

Straight lines occur in many forms, continuous, interrupted, horizontal, vertical, diagonal, and at other angles. No particular interpretation can be placed upon these arrangements, for they were no doubt the early expression of artistic hearts. From the straight lines, three outstanding motives have developed, the "T" pattern, the Key pattern, and the Recurring Line pattern. All of these are favorites in Chinese fretwork, and are found in the decorations of some of the oldest pottery, dating back several centuries, so it is not astonishing that lines forming frets are frequently seen.

With a knowledge of straight lines, it is rather surprising that the Chinese did not use the square, and rectilinear figures in general, to a greater extent. Though these occasionally occur, the design most frequently encountered is that in which a crude checker-board appearance is given by dividing larger squares into smaller ones, by means of different colors; this is sometimes known as the dice pattern, a modern cognomen. It is not unusual to find this motive combined with a circle, which may be within or without the square.

Circular design motives are not prominent in the field of most Chinese carpets, yet many occur in the borders, or guard stripes, the chief of which is undoubtedly that known as the pearl border which consists of a series of regularly spaced open circles, often colored, upon a darker background. In the older carpets, the pearl was unmistakable, and signified "precious", but in most pieces of to-day, little attempt is seen to depict the pearl in accepted form. Rather, a simple "dot" pattern has

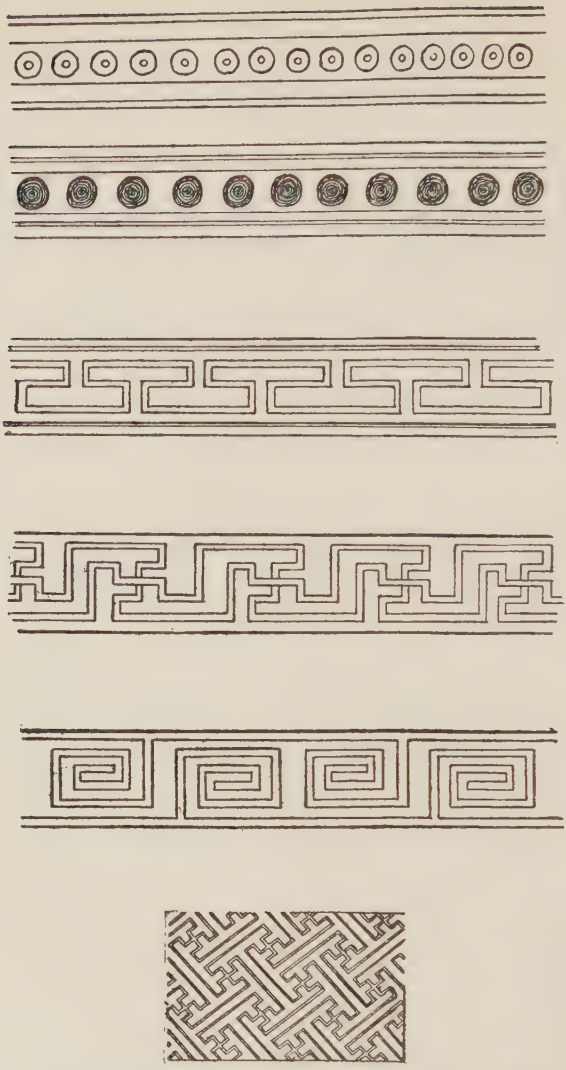


Figure 3: Some borders and geometrical figures. The two upper ones are the dot or pearl pattern. Next is the interlocking T, followed by a recurring swastika, and a recurring line pattern. The lowest figure shows an over-all diaper pattern.

evolved from this more elaborate effort. A second circular design, seldom found in modern pieces to any extent, is that known as the cash or coin pattern, which consists of a series of circles, intersecting in such a fashion as to give the impression, when viewed in the proper optical light, of the old Chinese coin with the hole in the center, the "cash". Very frequently, this design may be superimposed upon the long knot, or vice versa. The whole symbolizes "endless prosperity and life."

Developing from the early cuneiformic attempts of man to communicate with his fellows, have descended four characters which are famous in Chinese symbolism.

The foremost of these, the venerable swastika, is said to be of Chinese origin, though it is found throughout the world in ancient carvings and weavings. It is probably the most antique character associated with man's spiritual and æsthetic development. In the various countries in which it is found, it has various meanings, most of which are linked with good luck and prosperity. In China, as well as these, it symbolizes the "heart of Buddha", and "ten thousand", the latter being the acme of perfection among the ancient Chinese. Swastika designs, more than any other single one, are associated with the rugs, both old and new, in some portion. In modern times the symbol of luck has been largely relegated to guard stripes, corners, or borders, where formerly it constituted much of the field or ground of the carpets. It occurs in many forms and modifications, as well as with other symbols. When not found pure, its most frequent companions are the interlocking T and Key patterns, and the endless knot of destiny; more rarely it is found associated with the thunder line.

The character *shou,* in either the round, or elongated form, is found throughout the many ramifications of Chinese life. The expression conveyed is essentially "Good Wishes for Long

Life." Combined with other characters, the same idea is expressed in the *shou* contribution.

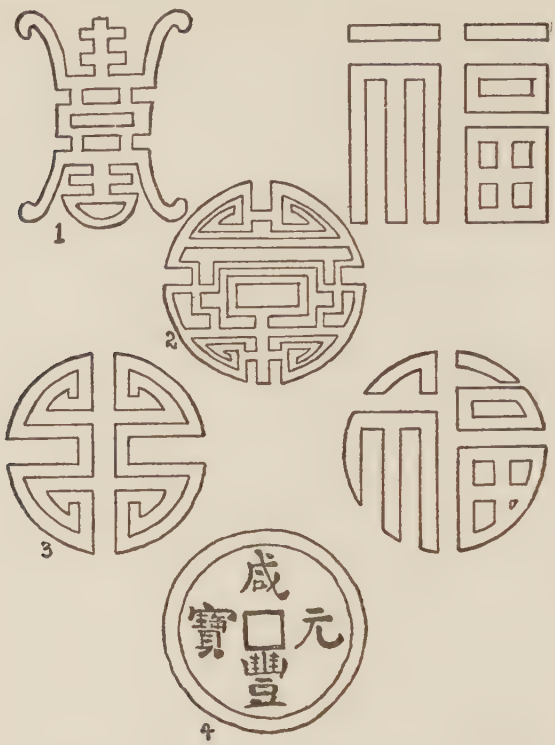


Figure 4: Character Patterns. The commonest are (1) long *shou*, (2) combination of *shou* and swastika, (3) round *shou*, (4) coin or cash.

In frequent association with *shou*, is one of the most ancient of Chinese characters, *fu*. This is interpreted as "blessing", but is generally considered to express "happiness"; consequently it has a prominent place in the past and present weavings of China. Occasionally the character is doubled, it being then the implication of "unbounded happiness".

The fourth famous character, if such it can be called, is obtained by a modification of *shou,* round or long, combined with a double swastika. The resulting figure thus becomes an ultimate expression of well-wishing, which may be interpreted as "Longevity, good luck, abundance, and prosperity, ten-thousand-fold". This character appears to have had its origin in the Chinese desire for lengthy expression of sincere kind thoughts. Occasionally it may be the sole motive in a rug.

In the physical division are found representations of those things associated with the people in a material or semi-material fashion, and which do not have as deep an interpretation as certain other symbols.

Water is one of the chief things of this nature to be depicted. If the water is placid, it is represented by semicircles, placed one above the other in close approximation. If the water is in ripples, these semicircles are slightly distorted or broken. If it is in waves, the circles are altered into lines, which meet at the top in an acute angle, a crude representation of waves, and a very popular motive in former times. If a further degree of activity is desired, small solid circles, or dots, may continue from the crests of the waves, to represent spray; often this is represented by small clouds at the crests. Water vapor in the form of clouds is a very ancient, and much used motive; these clouds may be of many shapes, sizes and colors. If rain is desired, it is usually represented by small straight lines, descending from the general region of the clouds, for a short distance; this is rarely found, however. Each of these forms of water may be highly conventionalized, particularly the waves and clouds, the latter being a favorite border or guard stripe decoration. A sea-dragon is often included in any design of water or waves, suggesting the origin of the fabulous animal.

A short step from the representation of water as clouds,

is the expression of thunder, lightning and fire. Thunder is typified by means of an adaptation of the ancient hieroglyphic, which may or may not be highly conventionalized, or else by a ball-like affair, from which flame-like projections extend, to convey the idea of lightning. Lightning and fire, as one might suspect, are closely allied, the symbols for the two in many instances being identical. Occasionally one finds conventionalized thunder and fire lines composing the borders of rugs.

Mountains are linked with the Chinese people. Much of their country is mountainous, so it is natural that mountains, crags, and cliffs, are found throughout their rugs. An element of the religious is also associated with these peaks, China having five sacred mountains*, the highest in the land, from which ministrations to the ruling spirits are frequently made. Sacred rocks are prominent features of the landscape, and many of these are depicted in weavings. No particular symbolism is usually implied, aside from the expression of strength, permanence, and the omnipotence of their deities.

With mountains and water are often found bridges, houses, and boats. Bridges and boats often represent successful crossing of spirits to another world of endeavor; the dragon boat, as well as being associated with the ruling house, represents the sentiment expressed in the beautiful mid-autumn festival. At this time, tiny paper boats, bearing a single candle, are placed adrift on placid ponds, to guide the spirits of the departed to a suitable haven, while weird music fills the moonlit air.

As a symbol of the unlimited power of the Great One, with control over all things, the scepter, or *ju-i,* is one of the favorite motives with the rug makers, particularly those of former periods, whose lives were probably more tranquil. It is usu-

* The five sacred mountains are placed one in the center of China, and one at each of the four cardinal directions from this central peak.

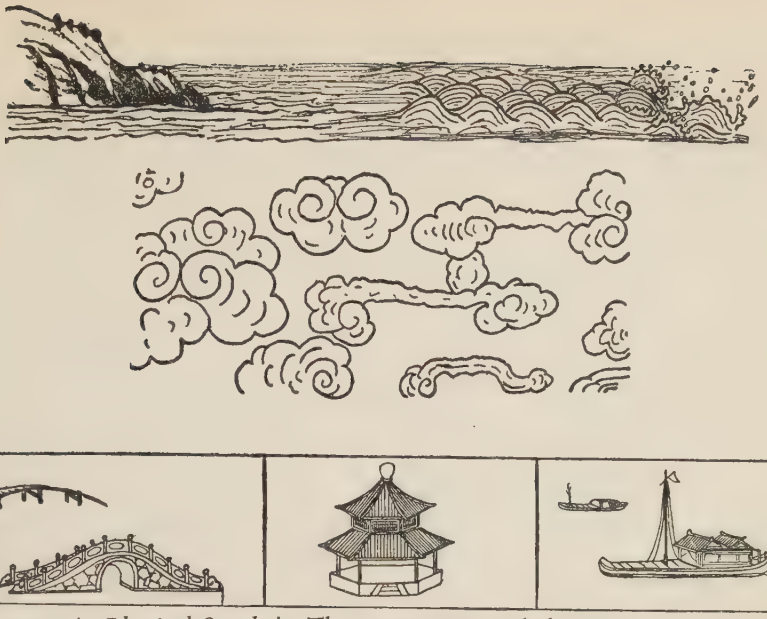


Figure 5A: Physical Symbols. The uppermost symbols represent mountains or rocks, with placid, rippling, and stormy water. The next row represent various shapes of clouds. The third row shows some of the bridges, pagodas and boats occasionally seen.

Figure 5B: Above are shown thunder, lightning, and the flaming Pearl. Lowermost are the three tokens of success.

ally depicted as a curved affair, which can be grasped; the head consists of a cloud, and clouds appear on various portions of the body, to denote its relationship to Heaven; occasionally it consists of a single cloud molded into conventional shape. The scepter is often associated with the writing brush, and the Tael, or silver bullion, the three then becoming tokens of success. The scepter suggests the meaning "According to your wish and desire."

Among the Chinese, a race of great horticultural ability, botanical products command great respect and attention. It is to be expected that their rugs show many floral motives; in fact, it is surprising there are not more, when the many species indigenous to China are recalled. The few which occur most frequently in rugs are those to which some special meaning has become attached, though other designs are by no means absent. Contrary to Arabic-Persian custom, Chinese botanical designs are attempts at accurate reproduction, rather than conventionalization, with the result that most species are self-proclaimed.

One of the most frequently encountered floral designs is that typifying the four seasons. The flowers used are not always the same, but the arrangement is similar, regardless of the species employed. Spring is symbolized by the peach blossom, the Chinese tree of life, or by the plum or prune blossom, which also implies the beautiful. Summer is depicted by the famous lotus flower, and seldom another. Fall is invariably suggested by the chrysanthemum, the flower of longevity. Winter is expressed by the narcissus, the plum, prune, or the bamboo, depending upon the arrangement; the last named also suggests permanence, through the hardness of its wood.

The orchid, though appearing in many rugs, has no particular significance; it is copied from old porcelains and paintings. In spite of its lack of symbolic meaning, the orchid is quite

the favorite flower where fragrance is preferred. For this reason, it, together with the prune, bamboo, lotus and chrysanthemum, often appears in the design known as "favorite flowers."

Of the outstanding flowers in Chinese folk-lore, the lotus and the peony are the most prominent. These are so thoroughly associated with the life of the people, as beautiful blossoms, and as food, that it is not surprising these flowers should predominate in the decorative art, including carpets. These are the only flowers which are conventionalized to any extent; the petals, or any other portion, may be the only clue to the design. Very frequently, these are not in their natural colors, when conventionalized. The lotus flower has a particular significance, as it has a distinct religious association, many deities being shown as floating or seated upon lotus leaves. As a result, it not infrequently happens that lotus petals may resemble clouds, or other heavenly attributes. The symbolism of the lotus is too involved to be expressed in any one phrase; the peony implies wealth and official respectability.

The peach is the favorite decorative fruit of the people, as it is the fruit of their tree of life, so often seen in their artistic pieces. The tree itself is usually depicted standing supreme, in spite of the loss of two or more boughs, thus indicating the permanence of life beyond that of any individual. The peach is considered the food of the gods; it also signifies longevity, and as such is invariably presented among other birthday gifts.

Associated with the floral designs less than one might expect, are found vases, often with old mottoes inscribed thereon. These have the symbolism of peace, through similarity of word tones, peculiar to the Chinese language.

A botanical design frequently found is that known as the

"three fruits". These fruits are the citron, peach, and pomegranate. The peach has been considered above. The citron usually depicted is the bergamot-like "fragrant fingers of Bud-

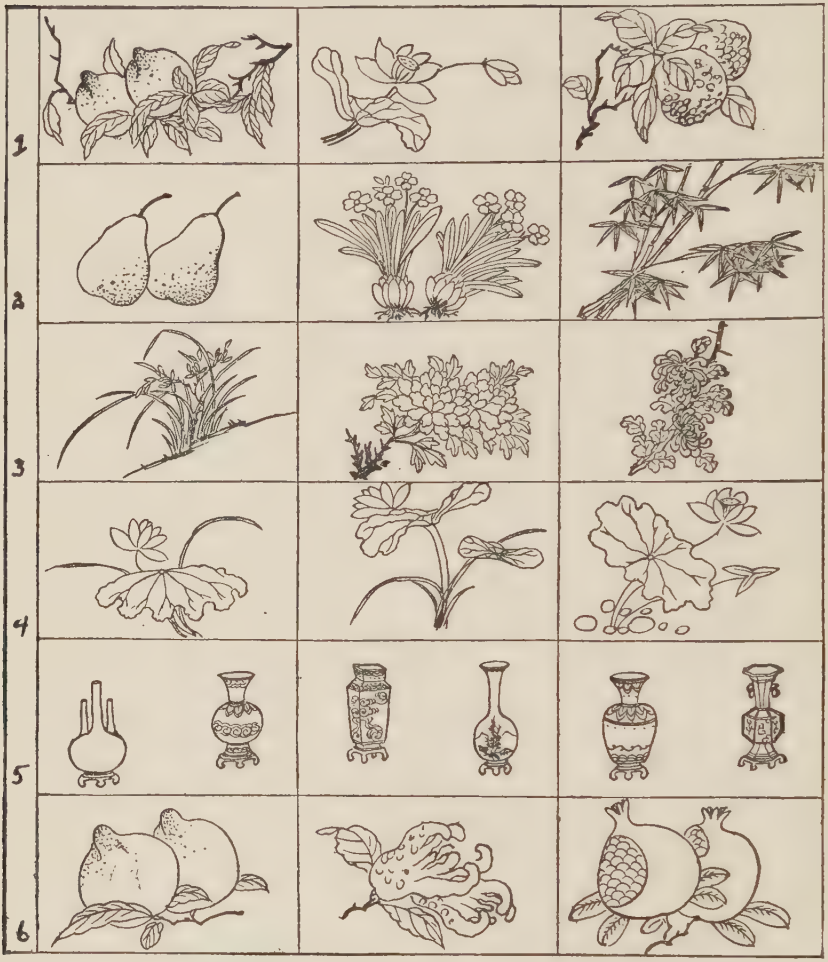


Figure 6: Botanical Symbols: (1) Peach, lotus, chrysanthemum; (2) Pear, narcissus, bamboo; (3) Orchid and peony; (4) Lotus; (5) Vases; (6) The three fruits.

dha", a fruit which in ripening opens with finger-like projections, hence the name. This fruit implies "happy life". The pomegranate symbolizes fecundity. When combined, the three indicate, "A happy, long, life, with many progeny."

Zoölogical motives provide a great quantity of the designs, either in whole or in part. The number of different creatures utilized is not greater than the flowers, but their profusion is much greater, especially in the older rugs.

First in importance ranks the dragon. For many centuries this fabulous creature has typified China and the Chinese; just how long cannot be determined, though reference to it is found in many ancient works. There are many kinds of dragons, depicted in as many colors; heaven, hell, the waters, the skies, all have their particular *lung*, always depicted in characteristic attitude. There are also old dragons, and young dragons, and in monarchical times, royal dragons, and lesser dragons. The Imperial dragon was always shown in imperial yellow, upon a blue ground, or else was a blue dragon upon a yellow ground, chiefly the former. The Son of Heaven, and members of the immediate Imperial family were permitted to use dragons with five claws; other princes, and lesser officials were restricted to four-clawed creatures, while further down the scale were found those with three claws. The colors also varied. The current model of dragon invariably has five claws. This characteristic difference in design may be an aid in determining the age of a dragon rug, though not always reliable.

The dragon has been, and is, highly conventionalized. It may be present as a whole, a series of straight lines, with the head the only clue to the motif, or portions of it, such as claws, its tail, or its head, without the rest; this may prove very confusing.

With the life of the people in former times, the dragon was

much associated. The emperor was considered a dragon, and in times of danger he changed his form, leaving the human form through the eyes. If this phenomenon was witnessed in any humble individual during sleep, it was taken to mean that some member of his family either had been, or would become, emperor at some time. The dragon was regarded as assisting in creation, and it was considered also to be the author of thunder and lightning. For this reason it is most often found in company with the "flaming pearl", the "dragon playing with the thunder ball", being a favorite motif. It is often shown in *yin yang* form with the phœnix, the female element, the two then implying "greatest happiness". The dragon itself was considered the ruler of all natural forces, and as such it was held in great awe.

Following closely upon the heels of the dragon, is the phœnix. This brilliant creature symbolizes benevolence and prosperity; it has representative portions from the stork, the peacock, and the Chinese pheasant, which it most nearly resembles. It is held to be the messenger of the "fairies", and as such commands great respect.

Two other creatures frequently found associated are the stork, and the deer. These are both symbols of longevity, it being held that neither could die under twenty centuries; in addition, the stork, or crane, also represents "official emolument". A deer-like creature, found more in old carpets, is the *ch'i lin;* this fabulous animal, said to have existed before the time of Confucius, but now extinct, was part deer and part unicorn. It implies "national welfare".

Other prominent designs in this class are the bat, and the butterfly. The terminal sound of *pien fu* has the same tone as that for the character *fu,* hence the bat is considered a representative of happiness. Associated with a peach it means "Both

happiness and long life". The butterfly is a symbol of longevity.

Less frequently encountered are the lion, elephant, dog, and tortoise. The dog and elephant are rarely found, and when

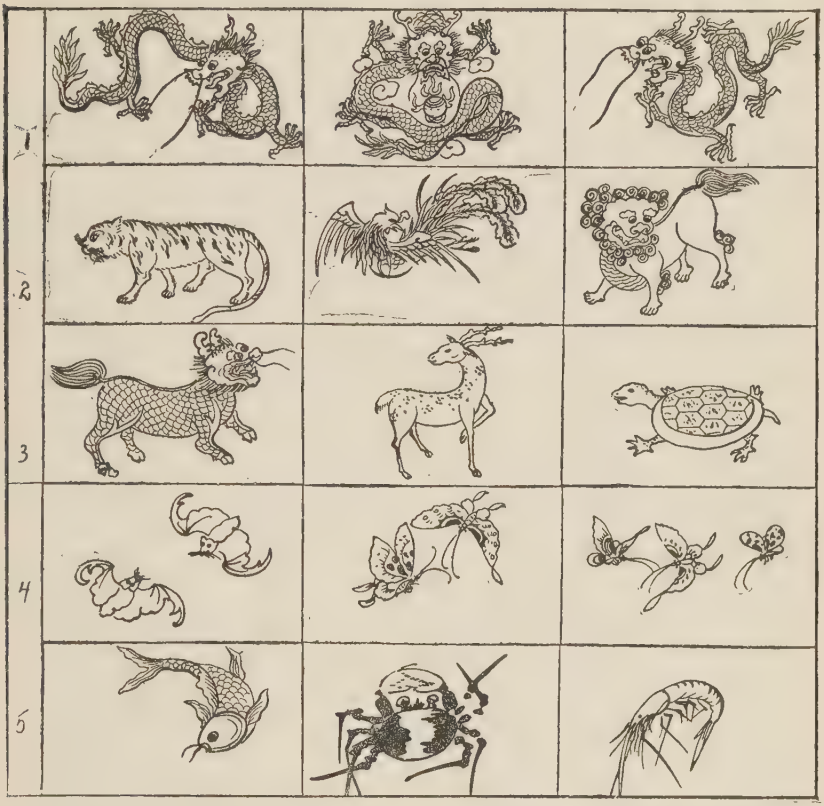


Figure 7: Zoölogical Symbols: (1) The Dragon; (2) Tiger, Phoenix, and So-called Foo dog; (3) Lion, Ch'i-lin, Tortoise; (4) Bats, and Butterflies; (5) The Carp, Lobster, and shell-fish.

seen are chiefly decorative motifs. The lion and tiger typify strength and ferocity. The male lion has one paw supported by a ball; the female has one paw supported by a cub. The "lion playing with the pretty ball" is one of the oldest designs

encountered. The tortoise is seldom seen, as it is considered the lowest of all living things; to imply that one is a turtle, or its descendants, is the utmost insult.

Fish are occasionally seen; in a general way they signify abundance and prosperity, the word for fish having a tone similarity with those words. In addition, the goldfish implies "great wealth". The carp is a great favorite because of its well known longevity.

Birds in general typify happiness; the magpie is a particular favorite, as it has the additional symbolism of good luck. On the other hand, a crow is considered an ill omen; as such it is rarely found in carpets, except as a portion of a legendary motive.

Emblems of mythology, interwoven with ancestor worship, occur as frequently as any, either in whole or in part.

From Taoism* have descended two classes of representations, the Eight Immortals, or genii, and their attributes. The genii themselves, singly and collectively, may be depicted amidst their classical surroundings of paradise, with or without emblems of the Literati accompanying. The so-called "fairy rug" is one of the most popular mural offerings of the present time; in it the eight genii are shown with their attributes. In addition, the eight emblems of happy augury may be included. The attributes are "eight wonderful mysterious articles".

Without going further into the lengthy account of these Immortals, suffice it to say that they are exponents of the Taoist doctrines, each of whom has some special object with which he works to attain the ultimate end, that of lengthening the span of life. In order of rank (not always followed in rugs), with their attributes they are as follows.

* A brief account of Taoism will be found in the Appendix.

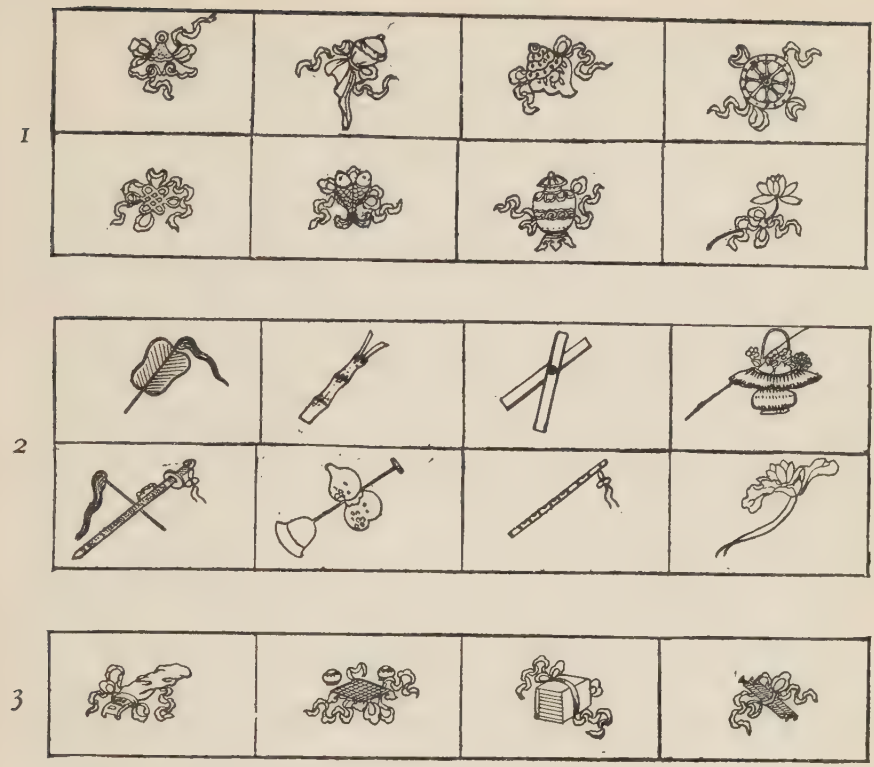


Figure 8: (1) The emblems of Happy Augury. (2) The attributes of the Eight Taoistic Genii. (3) The attributes of the Hiterati. (4) The *yin yang* and Eight Trigrams.

1. Chung, with his fan, conjures up the souls of the departed.

2. Lü carries the sword, of many supernatural powers.

3. Li, with the magic staff and gourd, as carried by pilgrims, is able to transmute all things with his staff, and concoct all manner of medicines and drinks from the gourd.

4. T'sao operates the musical instruments known as the castanets, made of bamboo. These are very popular in Chinese theaters and are supposed to exert a soothing effect.

5. Lan, carrying the basket of flowers, has supernatural powers through the blossoms.

6. Chang, the magician, carries the bamboo tube and rods of his calling, with which he tells fortunes.

7. Han, with the flute, is able to perform many magics with his music. The flute is one of the favorite musical instruments.

8. Ho, the only female spirit of the eight, carries the lotus flower, all powerful. The significance of the lotus has been explained above.

From Buddhism*, which exerted a most profound influence upon the culture, architecture, and art of the Chinese, have come certain symbols found in weavings. Some of these, such as the lion, have been considered previously. There remain, however, the Eight Emblems of Destiny, or Happy Augury, which are as follows.

1. The Flaming Wheel; this represents the Law in all its sacredness.

2. The Shell; a ringed, or conch shell of obscure meaning.

3. The State Umbrella; an umbrella awarded an official as a token of appreciation of services, or as a mark of rank, and carried before him on all journeys, including his funeral procession.

* Buddhism has been summarized in the Appendix.

4. The Canopy; this symbolizes protection from all ills.
5. The Lotus Flower, which has been mentioned elsewhere.
6. The Covered Vase; with the cover, the interpretation is "enduring peace".
7. The Two Fishes, male and female, represent abundance, happiness and wealth.
8. The Long or Endless Knot. This is probably the most used of all these symbols; it implies "duration without ending."

Another group of mystic emblems has descended from the realms of the past, in the form of the Hundred Antique Symbols, which deal with the cultural life of the people. Occasionally one finds many of these in rugs, but with a fondness for consistency, eight of them are selected for special veneration, as being the Eight Precious Things; in addition four Attributes of the Literati are highly prized.

The Eight Precious Things are as follows:

1. The Pearl is a symbol of purity and preciousness.
2. The Coin signifies wealth.
3. The Rhombus implies a prosperous condition of the state, and victorious achievements.
4. The Two Books typify the value in learning.
5. The Painting is representative of the wealth in art.
6. The Musical Jade Stone, through a sound rebus, signifies "blessed".
7. The Horn Cups, of rhinoceros horn, are prized for their resistant character.
8. The Artemisia Leaf signifies dignified condition.

The Literati, tradition relates, were usually found engaged in useful cultural pursuits, hence certain articles have come to be regarded as their attributes. These are the harp, the chessboard, the books and the paintings. These have no particular

significance beyond the expression of skill, learning, and culture.

Figure 9: Selections from the Hundred Antiques.

The last class of symbols which will be considered are those associated with that most ancient Chinese practice known as Geomancy, or *feng shui*, which deals with Augury and Divination. It is much in vogue even to-day. Through a detection of the relations of the various Elements and Forces of Nature,

priests of the cult decide the most auspicious times and places for weddings, funerals, and other events. The haphazard arrangements seen in the Chinese burial plots bear silent witness to the influence of this practice.

The subject of divination is extremely involved, and would fill a volume in itself, dealing as it does with every phase of life from birth until death, and even after death. The portions of the symbolic attachments found in rugs are concerned with the creation, the seasons, and astronomy. The supernatural animals aiding in the creation, the unicorn, phœnix, tortoise, and dragon, have been mentioned above. The celestial animals controlling the seasons, in a zodiacal manner, were four. The blue dragon, chief over the east quadrant, controlled spring; the red bird, reigning over the south quadrant, dominated the summer; the white tiger, representing the west quadrant, ruled over autumn; the northern quadrant, or winter, was dictated by the unfavorable animal, the black tortoise.

Two of the most interesting features of *feng shui*, as applied to rugs are the *yin yang*, and the Eight Trigrams. The former symbolizes the principles of being, the male and female elements, the two extremes, uniting to produce life. *Yin* means death, cold, darkness; *yang* signifies life, warmth, light. Symbols frequently found in *yin yang* combination are the dragon and phœnix, lotus and peony, bat and peach, and the bat and *fu*.

The Eight Trigrams, usually found surrounding the true *yin yang* form, are relics of the oldest Chinese written language. The uppermost one, of three solid lines, symbolizes Heaven; the remainder, in order from left to right, typify wind, earth, fire, water, mountains, thunder, and clouds. These trigrams are less frequently seen in the newer carpets.

CHAPTER EIGHT

THE WEAVING PROCESSES

The weaving, whether done in the home, or in the factories, is essentially the same, though the surroundings are vastly different. In both instances the majority of the operations are done by hand, from the arrival of the raw wool, to the carting away of the finished rugs.

Upon the arrival of the wool, twice a year, or oftener depending upon the demand, it is treated as described elsewhere, and is then sent out to be made into yarn. Of late, there has been a decided tendency to do the spinning in the factory, but in any case, the finished skeins are returned to the courtyard, dried, classified as to quality, and stored for future use.

When an order for a rug is received from the business office, or display rooms, usually located some distance from the factory, the wheels of the weaving process are set in motion. The desired design is carefully studied, and the quantity of wool required, color by color, is estimated carefully, most factories making a practice of over-estimating, rather than under-estimating, for from the surplus threads left after the weaving, pretty "hit and miss" rugs can be made. The wool is then sent to the dyer, and is impregnated with the colors selected. Emerging from the dyeing vats, the wool skeins are suspended from long poles hung across the courtyard, or from the roof, where they are air dried, often for several days. When this is completed, the threads composing a skein are invariably matted together; they are then set upon crude wheels, and the threads are carefully separated from their fellows by hand. The untangled thread is wound into balls, following which these are carried to the loom selected for the weaving, and suspended from a cross-pole situated behind the weaver's plank, from

PLATE 21

A LATE CH'IEN LUNG RUG

This piece, showing the usual tones of blues on yellow is characteristic of the late weavings during the Ch'ien Lung period. Within the edge band of blue is a conventionalized lotus border, and within that, a pearl band. The ground consists of conventionalized lotus flowers, with a central lion, or Foo dog, and others in the corner supports, as well as surrounding the medallion. It contains 90 knots to the foot. In size it is nine and one-half feet by seven.

Courtesy, Director, Victoria and Albert Museum, London

PLATE 21 A LATE CH'IEN LUNG RUG

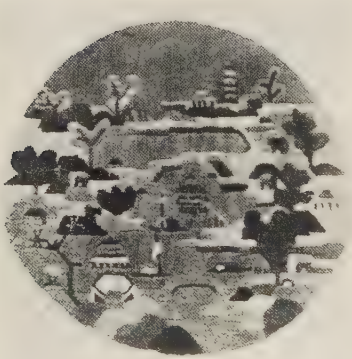


PLATE 22 PEKING RUGS

PLATE 22

PEKING RUGS

(*Upper*) A silk rug, approximately four by seven feet, in which purely Chinese motives are mixed with those of eastern origin. The design shows clearly the flaming pearl, and a conventionalized lotus flower and peony. Knots are 100 to the foot, and the colors are blue shades, with red, against a taupe ground.

(*Lower*) Two round rugs, made from left-over yarn from the weaving of larger pieces. That on the left is multicolored, that on the right in shades of blue, red and white. Even in the modern pieces it is difficult to have them truly circular.

which location, by a simple turning of the body, the various colored yarn may be reached for as desired.

In the meantime, the warp has been strung upon the loom, which consists of two large wooden uprights, about ten feet in length, and extending between these uprights, a heavy upper horizontal beam, and a corresponding heavy lower beam; the lower beam is capable of being raised or lowered. Prior to placing the warp threads in position, the lower bar is raised several inches; the cotton threads are then strung completely around the loom, extending in a vertical direction from the upper beam, around the lower one, and back to the upper one, to complete the circle. These are spaced at the required distance in keeping with the texture of the rug, following which the lower beam is allowed to settle down into place, its weight being sufficient to keep the warp tightly stretched. As an added precaution it is wedged in place, to guard against any movement, which might result in disaster to the rug. The number of warp strings to a foot is double the knots per foot in the finished rug.

Before the weaver is ready to commence work, a device for separating the warp threads must be added. Cotton threads are therefore run from alternate warp strings, and fastened to a small lever, which is attached to the cross-pole from which the balls of colored wool are suspended. It is within easy reach of the weaver, who, by moving it, can separate the warp threads into two layers, thus making the insertion of the weft thread a simple matter. The lever is alternated with each successive weft thread. If the rug to be made is a large one, there are several levers, one for each weaver, the number depending upon the width of the rug.

The weavers, usually four to a rug of eight or nine feet in width, sit upon a stout plank, raised a few inches from the

ground. The weaving is done from below upward, and as the body of the rug increases, the plank is raised accordingly. If the rug is a very long one, when the plank has been raised as high as possible, the loom is loosened, the warp is rotated sufficiently, and once more secured; the plank is lowered, and the process is begun anew. In the better factories, to every four or five weavers there is one supervisor or design reader, who constantly watches over the weaving as it progresses. Before the weavers have mastered the design upon which they are working, the supervisor calls out the specifications as to colors, and the apprentices reply in a subdued sing-song tone, which sounds much like the theater, repeating the formula given to them, to insure accuracy.

The first step in the actual weaving is the "running through" of several cotton weft threads, to form a base, or web. These are interlaced with the warp threads, wound around the edge of the warp, and returned into it, where they are securely tamped into place by means of a crude metal comb, thus causing the dull "thud, thud" associated with the rug factory. When a sufficient number of these have been placed in position, so as to form a solid base, the weaving of the rug proper is commenced.

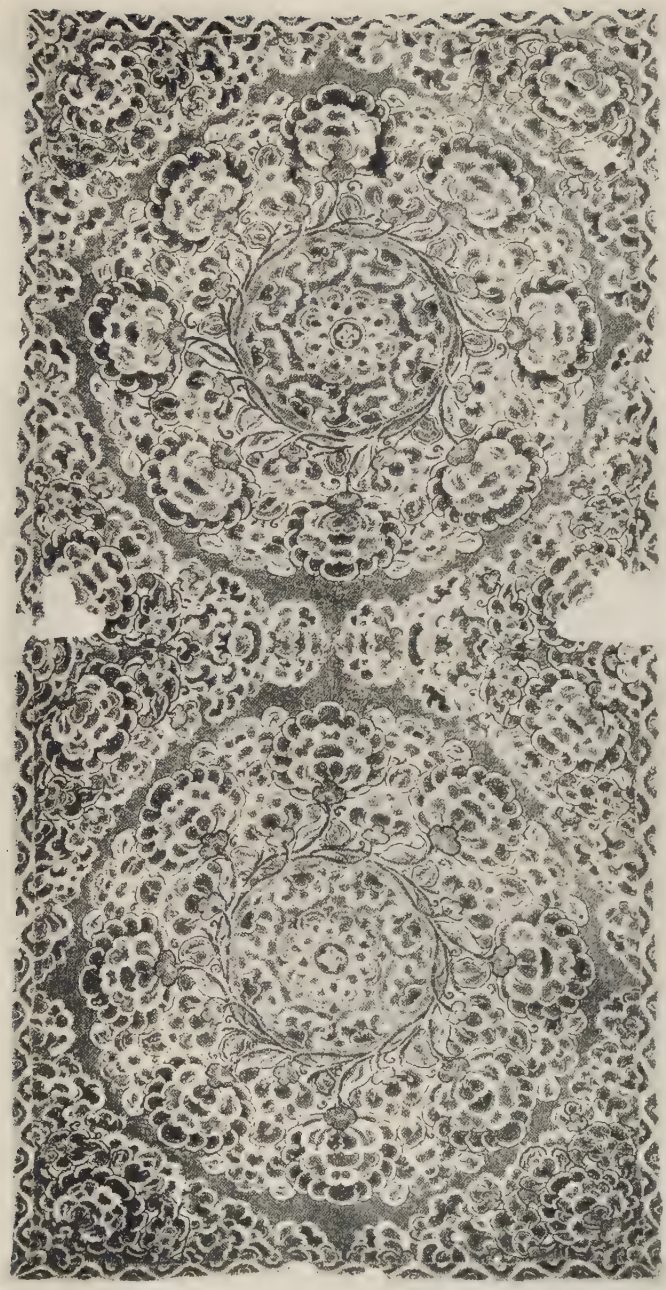
The miniature design, in colors, is given to the weaver, who studies it intently from time to time; that there may be no mistake, the same design, enlarged to the desired dimensions, with every curve retained in proper relation, is cleverly outlined upon the warp, from a paper tracing made expressly for that purpose, but lacking the colors. Most of the older artisans are familiar with the designs used, but this procedure is followed as an additional safeguard.

Technically speaking, the rug is not woven; it is tied. Nor is there a true woof, but rather a cotton filler, which serves

PLATE 23

PRE-MING RUG

Another of the 8th century rugs in the possession of the Japanese Imperial Household. This one consists of intertwining lotus blossoms and stems, conventionalized. It is made by felting, and the colors are brown, indigo, and white. Note the missing portions. Its dimensions are approximately nine by five feet.



Courtesy of the Shosoin, Nara, Japan

PLATE 23 PRE-MING RUG

Courtesy of the Metropolitan Museum of Art, New York

PLATE 24 CH'IEN LUNG MEDALLION RUG

PLATE 24

CH'IEN LUNG MEDALLION RUG

A weaving of Ch'ien Lung made in the 18th century. The field is yellow and taupe shades, and two shades of blue, with a little orange and blue, as necessary for the design. The border repeats these shades. The rug is eight by five feet, with 96 knots per foot. It is an antique rug, the design of which has been copied in many modern pieces.

the purpose adequately however. Selecting a single thread, of the yarn designated to form the end of the rug (at the bottom of the loom) the workman skillfully inserts it through the meshes of the warp, in such a manner as to include two warp threads in the turn of the thread as it passes from the front to the rear, and back to the front, thus forming a knot, which is quite secure, and is made more so by the weft.

Various knots are used in Chinese carpets, but in the main two types predominate. From the manner in which these encircle the warp threads they have been designated "single" and "double" knots. The former, used for the body of a rug, and occasionally for the sides as well, may be traced to Persia; it is allied to the Sehna knot, from the town of that name. The latter, used most often to finish the edges of the pile, though occasionally found in the body of the rug as well, is allied to the Ghiordes knot of Asia Minor. Both types of knots may be found in a single rug, a fact which makes the knots of little value for purposes of identifying the place of weaving. In Chinese rugs, two warp threads, never more, are included to form a knot, a feature which distinguishes them from many other Oriental pieces.

The knots are divided into "right" and "left", depending upon the relation of the warp string around which the wool thread is first tied, to the second warp string. If the threads from the first warp string, as they encircle it, are so twisted as to come around the second thread of warp in such a manner as to have it lie to the right of the original warp string, the knot is a right-hand knot. If the second warp string is on the left, then the knot is a left-hand knot.

The knots are usually tied from left to right, on the loom, all the knots of a single color being tied successively, in any single row. The gaps are then filled in with the desired colors,

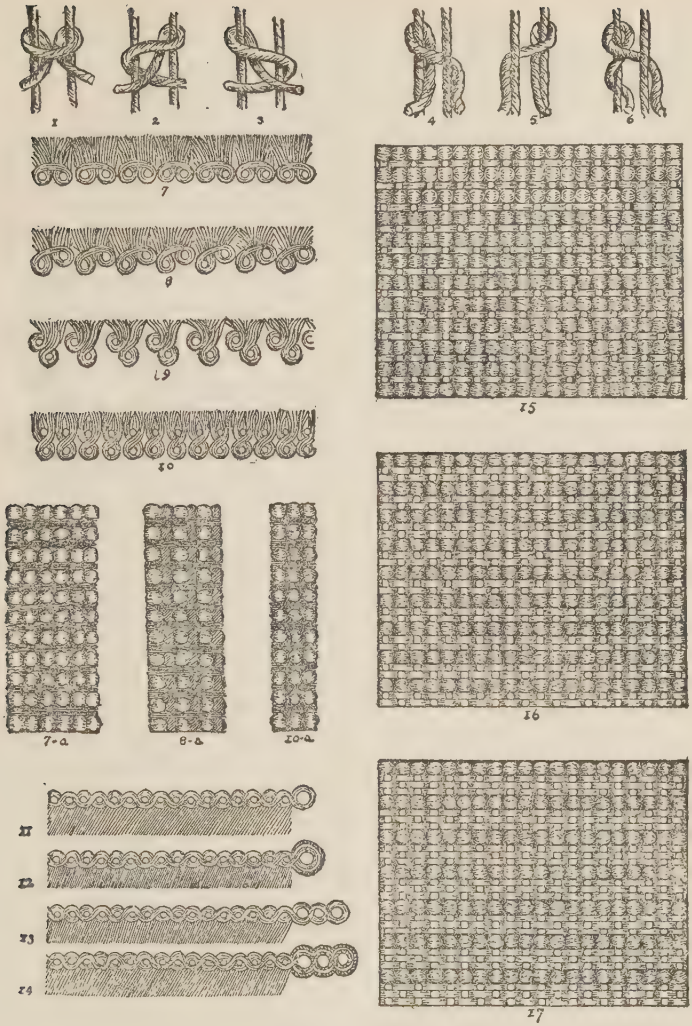


Figure 10: Nos. 1, 2, 3, 7, 8, 9, Ghiordes knots. Nos. 4, 5, 6, 10, Sehna knots. No. 11, Weft-overcasting. No. 12, Double-overcasting. No. 13, Weft-selvage. No. 14, Double-selvage. Nos. 15, 16, 17, illustrate one, two, and three threads of weft passing between two rows of knots.

thus forming the design. As each knot is tied, it is swiftly drawn taut, is pulled downward on the warp strings to lie against the weft threads of the previous row of knots; with a small cleaver, the yarn is neatly severed at about three-quarters of an inch from the warp, thus forming the pile of the rug.

When a row of knots has been completed, one hand is inserted between the two layers of warp strings, while the other hand cleverly pulls through the weft threads, following which they are tamped down securely; unequal tamping is the cause of the curious unevenness found in some pieces. The majority of the rugs contain two weft threads between successive rows of knots. These threads are usually one-half the diameter of the warp threads, but not always so; this tends to make the number of knots in a horizontal foot equal to that in a vertical foot. It is the usual custom to carry the weft threads around the terminal warp strings, at the sides, in one of the manners known as overcasting, double or triple overcasting, selvage, double, or triple selvage. This manner of finishing the sides of the rugs is some aid in identifying the source of the pieces.

Following the insertion and tamping of the woof, the weavers, with clumsy scissors, trim the projecting pile threads to the desired length, which varies from very little above the knots to three-quarters of an inch; this is done with a neatness inconsistent with the bulkiness of the instrument in hand. A new row of knots is then woven as described, more weft threads are added, and the rug is built, from below upward, thread by thread, inch by inch, day after day. If the rug is a particularly long one, when the original set of warp threads is exhausted, a second set is spliced to the end, and the weaving continues. This splicing may be repeated any number of times. Side-splicing, or joining several carpets together at their edges, is a more delicate process, and is rarely employed. One of the

largest carpets, that in one of the courts of the presidential palace in Peking, well over one hundred feet square, was woven in this manner, but this particular carpet is not a very good example of the practice.

Before the rug is taken from the loom, though sometimes delayed until trimming, the pile is subjected to a process of purely Chinese invention, known as "cutting out." Each minute portion of the design, no matter how elaborate this may be, is made to stand out in contrast with its surroundings, not only by its different color, but also by the skillful removal of a portion of the immediately adjacent pile threads. The effect of this ingenious "carving" considerably enhances the appearance of the rug. When the cutting out is completed, a master workman, using a clumsy looking pair of scissors (the only kind employed in rug making, it seems!), trims the pile of all its uneven and irregular spots, the while the rug is laid on the ground, or on a large piece of grass matting. Following this the rug is generously brushed, dusted off, and measured, ready for delivery, a finished product of the loom.

Where formerly such a rug soon reached its owner, within recent years an additional step in the journey has been added. The practice of chemically washing the rug, prior to its final sale, to give it an altered appearance, highly desired in certain quarters, will be mentioned more fully in a later chapter. Suffice it to say that any rug subjected to a chemical wash should be very carefully investigated before purchase.

It has been said that Chinese rugs have a harsh appearance. This may be true of a few, especially since commercialism has crept into the industry; in some of the larger centers, the Chinese weavers have learned some bad habits from the western merchants, but in the western provinces, this is far from being the case. The rugs woven in some inland points, admittedly

the finest of the family of Chinese rugs, are truly the product of artists, for these western craftsmen are more careful workers, whose innermost desires, influenced by tradition, folk-lore, and superstitious leanings, are to turn out a superior product, which cannot be equalled nor surpassed.

CHAPTER NINE

RUG TYPES, OLD AND NEW

THROUGHOUT the realm of Chinese Rugs, the dominant keynote is simplicity. They originated to meet the wants of a simple life. The colors are simple in range and blending. The designs are artistically simple. It is not surprising, therefore, that all Chinese rugs have something in common, which renders them more difficult to classify, as to period and origin locality, than is the case with the rugs of the Near East. Because of this, but more so because not all types of Chinese rugs have reached foreign countries, there has been a geueral tendency to classify all rugs coming from the seaports of China, chiefly Tientsin, as simply Chinese rugs. It is as just to classify all Near East rugs as Turkish, Arabian, Indian, etc., without specifying essential differences among the members of each group, as it is to label all rugs in China as Chinese rugs. In an art as widespread as that of rug making, it is but logical to suppose that the Chinese member is no exception to the rule of local distinguishing features, and this is the case. However, because of the nature of Chinese civilization, the classification of Chinese rugs is not the simple task that it might appear to be.

A study of the antique rugs is a study of the evolution of the weaving art, especially in the field of design. The technique has remained very similar, if not identical, for several centuries, but the figures executed, and the manner of shaping them, have varied considerably, from the geometrical and conventional patterns of the T'angs, Sungs, and Yüans, to the elaborate floral and picture rugs of the present time. In addition to the design, the manner in which the colors have been combined in the design furnishes reliable information as to the period of any rug. It has been related elsewhere that the range

PLATE 25

A RUG OF THE CH'ING DECLINE

This rug, of approximately the same texture and size as that shown in Plate 24, was woven about fifty years later, in the 19th century. The difference in the arrangement of the medallions, and the coloring is striking. The design is more conglomerate, with a variety of figures selected apparently at random. Two colors predominate, blue and yellow, the latter forming the ground. Buddhist symbols predominate.

Courtesy of the Metropolitan Museum of Art, New York

PLATE 25 A RUG OF THE CH'ING DECLINE

PLATE 26 PAOTOW PICTURE RUG

PLATE 26

PAOTOW PICTURE RUG

An excellent example of the weaving of Paotow, in which it is difficult to appreciate the fineness from a photograph. This rug is about five by seven feet, and contains 120 knots to the foot. The grade of wool is fine, and the pile is short. The shading is carefully carried out. Note the absence of borders. The ground is taupe, the storks white and black, the foliage shades of green, the ground shades of gray. An identical rug, owned by Dr. Wendell J. Stainsby, has a striking red color as the ground, and has three boats in the background.

of colors utilized in the past has been somewhat narrow, consisting chiefly of primary colors, or basic backgrounds of white and black. Though in many instances these colors were combined without apparent pre-arrangement, or without a reasonable basis, the Chinese had a fair knowledge of the principles of color, as is shown by their other artistic efforts. There is also the well-known fact that they used the complementary colors, yellow and blue, better than any others employed, and better than any other races, not excepting the Persians. However, failure to apply the principles farther afield, in using red and attempts at green, has resulted in the accusation that former Chinese colors have been rather glaring; there can be no gainsaying this. Yet in the passing of time, the weavers learned to subdue their colors, then to inaugurate various shades, until to-day they are combining their colors into a pleasing whole, soft, yet not devoid of retiring contrast, an artistic product, in keeping with the best principles of modern decoration.

To determine the age of any rug within limits of a few years is well-nigh impossible, chiefly for the reason that Chinese rug making has not differed appreciably from year to year, or decade to decade. Yet it is quite within the realm of possibility to determine, with a reasonable degree of accuracy, the period of years during which any particular rug was woven. In this connection, a knowledge of the designs of the various periods is invaluable. Since this is not infallible, old designs having descended to the present, it must be coupled with a knowledge of the methods of weaving, and the dyes of former and present-day weavers. Too, much valuable information may be obtained from an examination of the wool, and its manner of spinning, which is rather more loose in the older pieces.

In classifying the rugs, it is not altogether possible to delineate them on a basis of locality, as with the Near East weavings,

or as modern rugs, for the early weavers migrated far afield, and intermingled with artisans from Tibet, Mongolia, and Turkestan. Nor is it altogether satisfactory to classify them on a basis of the century in which they were woven, for it is not always possible to determine this accurately, and weaving did not change sharply at the end of each century. Likewise, rugs cannot be attributed to certain dynasties, as with some other works of art, without much confusion. It seems advisable, therefore, to adopt a classification which combines the meritable features of both the dynastic and century methods for the antique rugs, while reserving the locality classification for the modern pieces, insofar as locality applies to a type of design and weaving. While it is often possible to base a shrewd opinion as to the origin of any old piece upon a thorough examination of the weaving, this distinction is less marked than in the modern examples. Upon this basis, Chinese rugs may be divided as follows:

A. Antique:
   1. Pre-Ming—prior to 1370.
   2. Ming:
      (a) Early—14th and 15th centuries.
      (b) Middle—16th century.
      (c) Late—17th century, first half.
   3. Ch'ing:
      (a) K'ang Hsi—17th century, last half.
      (b) Yung Cheng—18th century, early.
      (c) Ch'ien Lung—18th century, late.

B. Semi-antique:
   1. 19th century—Ch'ing decline.
   2. Transitional Period—1860—1912.
   3. Republic, early—1912—1916.

C. Modern:

1. Republic—Western Influence—1916:
   (a) Paotow
   (b) Ninghsia
   (c) Peking
   (d) Tientsin
   (e) Yarkand
   (f) Kashgar

Unfortunately, practically no pre-Ming rugs remain to the present day. The exceptions are lying in a delicate state in the Japanese Imperial Museum, at Nara (Plates 1, 2 & 23). These pieces have been attributed to the T'ang dynasty, and this is probably correct, for the fiery Tartars and Mongols do not appear to have been creators, but modifiers, in artistic fields. In any case, they failed to create any rugs which have withstood the ravages of conquest and time. The Tartar and Mongolian influence is their only bequest, in spite of Kublai Khan's efforts to stimulate the artistic.

Following the brief renaissance, experienced as a result of Kublai's introduction of new ideas into the weavings of the Tartars, and their continuance during the brief Mongol régime, the rugs of the Mings came to resemble those of former times, with just a hint of the Sung-Yuan influences. The number of Ming rugs existing to-day is very limited, and of these, most are in Europe and Japan. Though divided into three classes, the rugs of the Ming age are very similar. The chief differentiating feature between a 14th century and a 17th century Ming rug is that in the former, Persian, Arabic, and Mongolian influences are more prominent than in the latter, which seems more of a Chinese type.

In general, rugs of the Ming dynasty, though they may be of any size, are usually of conveniently small dimensions, rec-

tangular or square, and almost never round. Their colors are the most mellow encountered, due to their age, and are extremely soft, maintaining a subdued effect throughout. Somber shades of yellow and blue, with brown and a suggestion of red, are the only colors found. The balance is well maintained, as a rule, the borders being narrow, or figured, with geometrical motifs predominating, while the field contains either medallions, or an all-over pattern, or both, also geometric. Key, line, T, and swastika figures are most often encountered, although occasionally a conventionalized dragon may be found in the medallions. The all-over figures are geometric, such as "tiger marks", or are floral; the corners frequently support motives similar to the medallions, which may be either round or octagonal. The pile is of wool, or, rarely, silk, and is woven upon a cotton warp, of not more than 80 or 90 threads, usually less. Some of the justly famed "metal and silk" rugs date to this period, the silk pile being woven into a warp of gold or silver threads.

With the conquest of China by the northern Manchus, many changes were introduced into the rugs, chiefly in the fields of color and design. The Ch'ings were more advanced, and liberal in their ideas of art, and consequently it is not surprising that under them rug weaving reached its highest level of attainment. So noticeable were the changes introduced by successive generations of weavers that it is convenient to classify the weavings under the names of the Emperors who sponsored the art.

The early rulers of the Ch'ing dynasty were forceful personalities, who ruled wisely and well. One of the best of these was K'ang Hsi, and during his reign carpet weaving reached its first high point, due to his instructions to Manchu artists to enrich the designs of the arts in general. Consequently, there is

less of the geometric and more of the natural decorative motifs, with a strong tendency to include floral patterns, to be seen in the rugs woven under his patronage.

K'ang Hsi rugs may be divided into two sub-classes, the early and the late. In general they are quite similar, the chief distinctions being the weakening of the geometric main motifs in the former, and their almost total absence in the latter; coupled with this is the fact that the earlier rugs are much less decorated and elaborate than those of the later years of his long reign. Probably the most significant feature is the introduction of imperial yellow into the later rugs, while the earlier rugs continue the limited color range of the Mings. This yellow has a peculiar reddish tint, which can be obtained only by dyeing a fugitive red over a fast yellow of bright hue. The shade resulting beggars description, and must be seen to be recognized; it is not present in modern rugs, unless they are put through the old dyeing process.

K'ang Hsi rugs are of sizes and shapes similar to those of preceding times. Their borders are narrow, often consisting of a single stripe, but they are elaborate at the same time, thus preserving a balance with the medallion in the center, and the patterns in the corners. If one characteristic predominates in distinguishing these rugs from former ones, it is the prominence of the medallions. These are situated in the center, at the corners, and at other opportune sites throughout the field, always symmetrical. The ground upon which they rest may be plain, but usually has a definite pattern, and occasionally a subpattern as well. These, in maintaining the simple character of the design, are modifications of the main theme. In addition to the designs of former times, these rugs display a marked tendency toward ornation; scrolls, vines, flowers, and dragons are favorite patterns, the dragon being the most depicted, in keep-

ing with Manchu domination. The colors of these rugs continue to show blue, but predominate in yellow; frequently they have a brown edging, and touches of red throughout the field. The pile is wool, warp and weft are cotton; the texture is more firm than in older rugs, as there are from 80 to 120 knots per foot. Occasionally a metal and silk, or a pure silk rug, dates from this period.

During the short reign of Yung Cheng, colors, designs, and methods of weaving changed but little; it is difficult to assign rugs to this period with any degree of certainty. Probably the safest distinctions are that the designs are slightly more ornate, lemon and allied shades of yellow are found, and the practice of cutting out comes into great prominence, although outlining by a contrasting color is by no means eliminated.

With the establishing of Ch'ien Lung, a grandson of K'ang Hsi, upon the Manchu throne, carpet making reached its second high level. This reign was very beneficial to all phases of Chinese art, and rugs were no exception. Weavers became more skilled, and elaborated pieces of all sizes; for the first time round rugs make a general appearance, in addition to the usual quadrilateral ones. Many of the rugs show the former color schemes, but most widen their range considerably; shades of blue strike a dominant note, together with imperial and other shades of yellow. For the first time, red comes into prominence, and attempts at green are made; white is seen more often too. These colors are made to blend with no small degree of harmony.

In the general widening of scope, rugs acquire two borders, one geometric, one floral or non-geometric in its motif; these borders are very elaborate. Still maintaining perfect balance, the groundwork becomes elaborately artistic, frequently rather complex themes contrasting with the ornate borders. With

Mohammedan influence, a tendency to be more accurate in the execution of designs is apparent until the ground fairly blossoms with objects of natural appearance. Symbols of many kinds make their way into the rugs, and in addition, it appears common to include a special design in the background, to form a mild contrast, and thus accentuate the main pattern. With such a tendency to profusion, it speaks well for the artistic temperament of the Chinese that the rugs of this period do not appear over-ornate. The pile, as formerly, is of wool, the warp and woof of cotton, while the knots per foot range from 80 to 150.

Following the reign of Ch'ien Lung, rug making made but little progress, except that a greater variety of colors and designs crept in, while there tended to be an elimination of the medallions, which opened out to become a part of the general field. Consequently, it is impossible to assign pieces to the reigns of Chia Ch'ing, Tao Kuang, or their successors; it is much safer to include them all as representative of the nineteenth century. Sizes and shapes, colors and designs, continued as before; at best, these rugs represent the period of Manchu decline.

While the Ch'ing dynasty was tottering toward its end, a brief stimulation of the art in rugs was received from contact with western civilization. For the first time, ideas from the advancing western nations made an appreciable impression upon the carpet industry. Rugs of this period are very difficult to determine, as this influence, coupled with a certain passive resistance, tended to make a confused result. In general, the rugs continued as before, with a slight looseness in the manner of design, and a monstrous range of colors, coincident with the introduction of the aniline dyes. For various reasons, many of these rugs have gone into the discard. It is interesting to note

that with the continued Manchu decline, the texture degenerated accordingly, the knottage seldom going over 90 to the foot. Any rugs of this period may safely be called transitional.

During the years following the establishment of the republic, until the economic influence of the west intervened, a period of change prevailed, characterized chiefly by a let-down in the quality of rugs, and a profusion of former imperial colors and symbols. Little attention is paid to color balance, or to accuracy of design, except in those pieces woven in the interior, far removed from turbulent Peking. As the great experiments with aniline dyes continued, it is not surprising that many of the rugs of this time are somewhat in the nature of monstrosities, with an excess of dragons, and previously forbidden symbols. Sizes and shapes remain as before, as do also the warp and weft. The texture is frequently very loose, with a knottage of from forty to ninety prevailing. All shades of colors are utilized, without regard to any definite scheme; borders may have no relation to ground theme, and both of these vary beyond description. Yet in spite of all the chaos, the interior continued to weave fine examples, and many of the most artistic rugs of the decade were produced, among these being the picture rugs of Ning Hsia and Paotow.

Amid this confusion, not aided by the European war, at length appeared a stabilizing influence, in the form of a severe economic depression, during which most of the perpetrators of the monstrous rugs faded from the scene, leaving behind those who needed no chastening. Out of this storm emerged a truly calm product, the beauty of which is apparent even to the uninitiated. Within the present decade, a type of rug has evolved, which retains all the luminosity of the older weavings, and combines with this the refinement of color and design

PLATE 27

PAOTOW RUGS

Two examples of Paotow rugs, which speak for themselves. The upper rug is nine by twelve, the lower one six by four. The massiveness of the colors, and the degree of blending must be seen to be appreciated. The lower rug shows the shading especially well.

Courtesy of the Jen Li Company

PLATE 27 PAOTOW RUGS

PLATE 28 NINGHSIA RUG

PLATE 28

NINGHSIA RUG

This is a picture in wool based upon the "*Pa p'i ma*" legend of the Chou Dynasty. Each of the eight horses is a different color, not excepting turkey red! The sky is blue, the hills and foliage shades of green, and the water shades of blue. The edge band is a dark blue. The rug shows a moderate degree of shading, and the figures are also cut out in places. It is six by three and one-half feet, and contains 110 knots. The pile is rather short.

characteristic of the moderm artistic conception of the west. There is every reason to believe that this type of rug will be a permanent class in the larger group of Chinese rugs.

The present-day rugs are best classified upon a basis of place of origin, which in turn is determined by the style of weaving. Like their ancestors, they have certain features in common. They are all woven upon a cotton warp, with cotton weft threads inserted between successive rows of knots, generally speaking. Occasional examples from Tibet and other inland regions may have woolen warp and weft. As a rule, wool composes the pile, but less frequently, hair and silk may be found. Examples of the metal and silk rugs are extremely rare. Threads may vary from 40 in the natural products to as high as 150 in the products of some of the interior looms, with a general average of 90 per foot. Three major zones predominate, so determined by natural and geographical barriers. Nearest the western world, almost on the seacoast, lie the two commercial centers of Peking and Tientsin, providing all but a small fraction of the total rugs exported. Rarely indeed do the other types of rugs reach foreign countries. In the second or middle zone, composed of the loop of the Yellow River, are found the artistic centers of Paotow, and Ning Hsia, reached only after a journey of several days. Farthest inland of the three is the tableland of Tibet, extending into the mountain ranges beyond. Here are the centers of Yarkand and Kashgar, where the rugs made show the influences of adjacent styles of weaving.

The rugs of Paotow are ranked first because of their fine texture and excellent workmanship; they frequently contain more than one hundred and sixty knots to the foot, and may resemble tapestries more than rugs. Their pile is moderately short, and is woven from the finest of wool, gathered from sheep raised in the protected great loop of the Huang Ho, a

fact which makes their wool less coarse than that of sheep exposed to the more rigorous climate of Inner Mongolia. Paotow rugs display a range and richness of color not seen in any other Chinese rugs; their use of brilliant shades of yellow, green, blue, and red, in massive and detailed combination, is not found in the rugs from any other locality. Rarely, one of these shades of green may not be as fast to light as in other examples. A border is usually absent, likewise an edge band of color; the rug breaks into the main theme without preliminary introduction, yet the result of this, while noticeable, is not displeasing. The motives of these rugs are simple, the designs are large; they are usually sacrificial, mythological, or pictorial, with a marked tendency toward the last. Shading of colors is most delicately accomplished; in this respect Paotow rugs far outshine other weavings. Because of their prominent contrasting colors, and high degree of shading, the designs are never outlined, nor cut out at the margin.

The warp threads, of cotton, are somewhat larger than the texture would lead one to believe; the weft threads are of similar dimensions, two occurring between successive rows of knots. The knot is the single type throughout, but may be either right- or left-hand tied. The ends are finished with a narrow web, the upper end being looped, and the lower end fringed. The sides are finished by a simple weft selvage. These rugs are quadrilateral, and may vary from mat to carpet dimensions; measurements are in Chinese feet. They are seldom intended for floor coverings.

The rugs of Ninghsia were the forerunners of those of Paotow, and resemble them in many respects, but they are less ornate. The workmanship, while it may be as fine as that in the Paotow pieces, is usually less fine, although the warp, weft, and pile threads may be of finer texture. The wool is of the

exposed Mongolian type, as a rule. The pile is somewhat shorter than in other rugs, but not as short as in the Tibetan weavings. Knottage rarely exceeds one hundred and twenty per foot. The warp threads, of cotton, are of a fineness in keeping with the texture, often not more than double-ply; the weft threads, of which there may be from two to four, usually two, never exceed the thickness of the warp threads. The knot is a combination of single and double types, with the former predominating; the knot is usually a right-hand one. The ends are fringed, with the extensions of the warp threads, of which several may be knotted for security. The edges are finished by weft-selvage, with the outer thread double-overcast in addition, in a few instances. The pieces are usually quadrilateral, and of small dimensions, suitable for traveling, upon the k'ang, or as hangings. In dimensions, Chinese feet are used exclusively, which at once distinguishes them from most factory pieces.

The colors are usually dull shades of blue, red, brown, with touches of yellow and green, as required. There may be no border, but there is usually a narrow, plain stripe, with corner design continuous with it; frequently this takes the form of the swastika, or the endless knot. The border stripe, if present, is usually of dark blue, or black, though occasionally it may be white, depending upon the shade desired to provide a suitable contrast with the field and the edge band, usually dark blue or brown. The field of the rug may contain the ancient symbols, or may be woven to represent a pastoral or other natural scene. In either case, by a clever use of color in the weaving, a delicate degree of shading is produced, which is one of the most pleasing features of the carpet. The design may or may not be cut out, but frequently is; rarely is it outlined in a contrast color.

Peking rugs, in a sense, represent the highest appreciation of the artistic, although the technique by which they are woven

is less accurate and refined than that of the inland centers. Warp and weft are of large dimension cotton threads, with two weft strands, occasionally four, between successive rows of knots. Usually the two weft threads equal one warp thread in size, the latter being of six- or eight-ply; more rarely, the woof strands individually are larger than the warp threads, in which case they do not exceed two per row of knots. The knot employed is the single knot, although in an occasional piece the double knot will be encountered; occasionally, both types are found in the same specimen, the former in the body of the rug, and the latter at the edges and ends. The knots are entirely right-hand tied, and number between eighty and ninety to the foot, occasionally one hundred. The sides are finished by double or triple overcasting, the ends by fringes. The rugs vary in size from mere mats, to exceedingly large carpets, and may be circular, oval, or quadrilateral in shape; dimensions are always in English feet. The pile is of wool, very rarely silk, not greater than one-half inch in length.

The designs of Peking rugs are innumerable, yet all show certain common characteristics. The colors have an extremely wide range, over one hundred shades being possible. The tones are always subdued and retiring, blending with utmost harmony, yet the colors have a faculty of quietly creating the desired favorable impression. The most utilized tones are shades of blue, black, taupe, brown, red, yellow, and white. To less extent are found green and gray. No attempt is made to include the imperial yellow of former years, but mandarin yellow is frequently seen. The greatest number of shades are those which carry out the principles of interior decoration, as applied in the western lands, for the rugs are woven largely for the export trade; artists are employed to supervise this phase of the manufacture. The patterns include both the old and the new, the ar-

PLATE 29

PEKING RUGS

The design of the upper piece shows the dragon, bat, and lotus, highly conventionalized. The massive arrangement reminds one of that seen in many Ch'ien Lung rugs. The colors are blue upon a taupe ground.

The motive of the lower rug is found in the Hundred Antiques, many of which may be detected in the borders, corners, and medallion. A perfect balance is maintained. The colors are taupe ground with blue, and occasionally red, yellow, and green, as required. Both specimens contain 90 threads to the foot, and are approximately eight by ten feet in size.

Courtesy of the Jen Li Company

PLATE 29 PEKING RUGS

PLATE 30 TIENTSIN RUG

PLATE 30

TIENTSIN RUG

This is the usual Tientsin rug, in shades of yellow, blue, and rose, and design of Westernized Chinese motives. It is a good commercial product, no different from thousands of others to be found in Europe and America. Colors are dark blue, gold brown, and dark red.

rangement of the former being, in a sense, modernized. A fairly wide color band is found at the edge of the rug, with the exception of the smallest mats. Lying within this are usually found narrow stripes of contrasting color, leading to the main portion of the rug. Border bands may be absent, or if present, may be geometrical, floral or mythological; favorite border themes are the bamboo, peony, bat and cloud, the swastika, key, and the pearl or dot pattern. If the rug is a large one, an inner border may be added, in which case it is usually contrastingly allied with the outer one. Narrow guard stripes may be present as well. The field may be simple or complex. There may be outstanding medallions, not too compact, upon a plain background; there may be an over-all pattern, selected from a wide range of subjects; there may be a combination of the two. Recently there has been a tendency to create a picture rug, usually a rough impression of a pagoda, camel-back bridge, or legendary scene; these efforts are much inferior to picture rugs of the interior. In addition to these, there are occasional "fairy" rugs, in which portraiture is adapted to rugs in a clever fashion. As a means of emphasizing the motives of these rugs, the Peking weavers resort to cutting out, color outlining, and raising, the last named being accomplished by leaving an extra long pile during the knotting, and later trimming it just enough to form the features of the individual portrayed. This forms a marked contrast with the remainder of the pile, which is not elevated. Frequently all three methods are found in one rug.

The rugs woven in Tientsin and vicinity are similar to Peking rugs, yet have three outstanding differences. In size of cotton warp and weft, and threads per foot, they cannot be distinguished, nor are the designs any definite proof, although they do afford a strong clue. The knot employed is usually the single knot, but some pieces are made in the double knot throughout,

as this is believed to make them withstand rough usage better. The ends are fringed, while the sides are finished by single or double overcasting, into which the terminal pile thread may be extended, as well as the woof threads. All shapes and sizes are found, with measurement in foreign feet. Tientsin being the chief seaport for North China, the bulk of the rugs woven there are made expressly for the export trade. The designs, therefore, have a decided foreign flavor, some of the patterns bearing no resemblance to Chinese motifs. In addition, the colors, while similar to those of Peking in range, are invariably of a darker hue. Tientsin rugs, unwashed chemically, are devoid of bright colors. The final distinctions lie in the depth of the pile, the type of yarn used, and the machine-like wefting. The pile is longer than in the Peking rugs, and the wool used is machine spun, or tightly hand spun. Even wefting is obtained by the use of a metal comb extending the full width of the rug. These points are in accord with the process of chemically washing, to which the rugs are submitted following export.

The rugs of the third zone are not featured by sharply representative characteristics among themselves, but can be distinguished readily from other pieces by their display of the Indo-Persian. They are wholly the result of home industry, for home use, or for sale to the pilgrims who may pass toward Lhasa. Knottage varies with the size of the wool yarn employed, which may be coarse or extremely fine. Both warp and weft may be of wool, or cotton, and may be colored. The ends are fringed; frequently the upper end may be looped. The sides are completed by simple overcasting, a two- or three-thread weft-selvage, or a side web. These rugs may be of small or large dimensions, depending upon their intended use. Carpet sizes are not uncommon. They are invariably quadrilateral in shape.

Kashgar and Yarkand are the chief centers for the excess of these rugs.

One would expect the rugs of Kashgar and Yarkand, whose location predisposes to commerce with Western Turkestan and Afghanistan, rather than with the valley of the Yang Tze, or Peking, to show considerable of the Indo-Persian, and this is the case, especially in color schemes. Red, yellow, white, and blue predominate, scattered in great profusion, in keeping with the rather crude workmanship, which lacks the artistic touch seen in the other Chinese pieces. Borders are usually narrow, and display the swastika or other line motives. Several guard stripes may be present. A central motive recalls the medallion, while octagonal forms, flowers, or mythical animals, construct the Chinese origin. Occasionally the motif may be floral throughout, but the chief themes are semi-religious in character. These rugs are interesting chiefly because of their quaintness and individuality. In quality they do not compare with the other weavings, and but few ever reach the coast cities of China, although they may be procured with comparative ease if one cares to undertake the severe journey inland.

In addition to the wool rugs described above, there are found two other classes, which should be mentioned. Silk rugs, of coarse texture, are sometimes made to-day. They are patterned and woven after the fashion of their wool relatives. Usually the silk dyes a bright color, which gives a clue at once. The silk used is generally the result of left-overs from the silk industry, or the yarn is made from the degenerating silk ropes and other articles, which formerly graced the palaces of princes and mandarins. The knots are of single type, right-hand tied, and vary from forty to one hundred and twenty per English linear foot, depending upon the size of the yarn employed, and the texture

desired. Warp and weft are usually of cotton. Peking is the chief source of these rugs.

Natural rugs, woven exclusively in the home, occasionally find their way to Peking, and abroad. They are prized more as a curiosity than for their costliness, though there is a certain quaintness attached to their somber hues. The designs are of the simplest, being geometrical, or conventionalized floral. The colors are those of the wool or hair from which they are fashioned. Camel's hair wool forms the body, with cow's, dog's, horse's and donkey's wool included in the borders and design patterns. Almost always they have an outer black border, which is the only portion of the rug that is dyed, this being necessary to cover the poor grades of wool used. If white, yellow, or any shade other than the natural red and brown is desired, a little sheep's wool is used. Warp and weft are of cotton; the yarn is extremely coarse, and is tied in large knots, about 40 to the foot. In spite of the crudity of these carpets, they wear rather well, and have a definite appeal, as representing the soul efforts of the peasants who weave them.

CHAPTER TEN

SELECTING A RUG

PURCHASING a Chinese rug, more especially the antique and semi-antique types, provides an excellent illustration of the Latin admonition to buyers. This is particularly true in the present age of competitive commercialism, where facts seem distorted all too frequently in efforts to complete a sale. As a general rule, it is much safer to trust the judgment of an expert, or a truly reliable concern, than to negotiate a purchase directly, but the venturesome uninitiated may do so if they are willing to acquire experience at the same time.

In selecting any rug numerous questions will arise in the prospective purchaser's mind, among which may be found the following: Is this a Chinese rug? How may one be sure? Is it a good rug, one that will wear well, or is it a cheap commercial product? Is it antique, semi-antique, or modern? Is its design correct and in keeping with the color scheme? What kind of dyes are used. In what part of China was it made? Is it now at its greatest value, or will this appreciate with the passage of time? Many of these questions can be answered with definite assurance only after a thorough examination of each rug, but generally speaking, the points covered in the preceding pages will be found of considerable assistance.

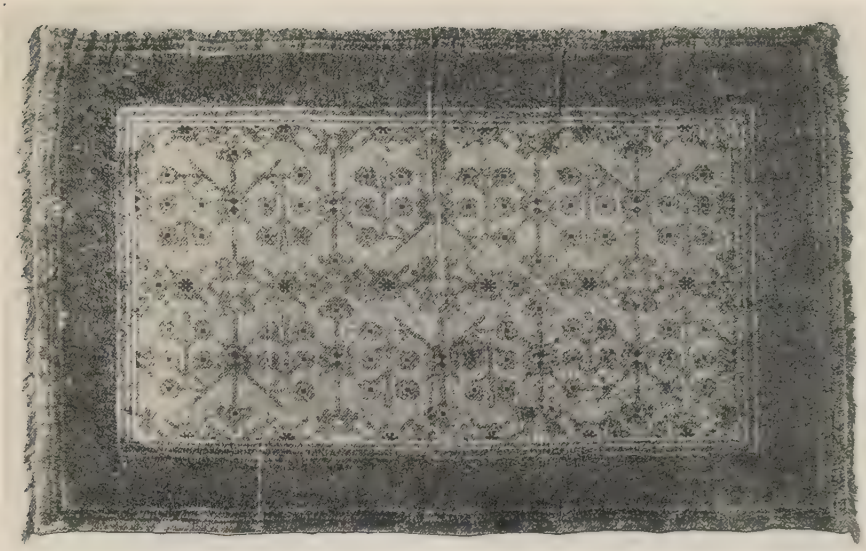
Answering the last of the above questions first, a rug is rendered valuable by its antiquity, and by its artistic concept, or both. Lacking both these qualities, a rug is not valuable, and will grow less valuable with time. If it has a correct concept, it may acquire additional value with antiquity.

There is no definite measure for the age of any rug. An effort has been made above to suggest a guide, but only an expert can reasonably establish the age of any antique piece, and

PLATE 31

RUGS OF EASTERN CHINA

These rugs show the mingling characteristics of China and the Near East. The upper, of silk, is thought to have been made in Shantung but although purchased there more probably originated in Kashgar, while the lower, of wool, is attributed to Yarkand. The conventional floral and geometric motives are distinguished by bright hues of red, yellow, blue, and green. The Kashgar rug has a woolen warp, dyed red, while the lower adheres to the Chinese cotton warp. The upper rug contains 70 knots, and the lower 90 knots.

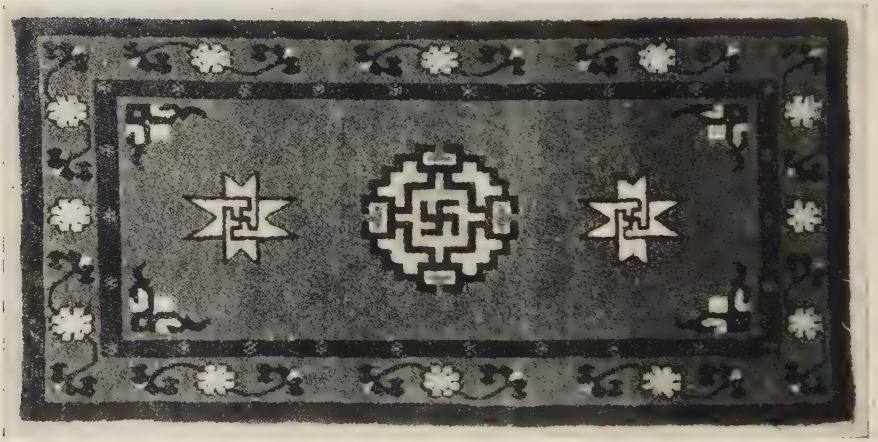


Courtesy, Director, Victoria and Albert Museum, London

Courtesy of the Metropolitan Museum of Art, New York

PLATE 31 RUGS OF EASTERN CHINA

Courtesy, Director, Victoria and Albert Museum, London



Courtesy of Dr. Clarence E. Maguire

PLATE 32 EASTERN INFLUENCE, AND NATURAL RUGS

PLATE 32

EASTERN INFLUENCE, AND NATURAL RUGS

(*Upper*) This is another of the rugs of Chinese Turkestan showing the admixture of motives. It is attributed to the late years of the 18th century, and is thought to have been made in Kashgar. It is 3′ 7″ by 2′ 8″, and contains 84 knots per foot. The colors are various shades of blue and yellow upon a red ground, with a brown edge band.

(*Lower*) One of the home-woven rugs in which there is little or no dye, the colors being obtained by a careful selection of wool. It contains 40 large knots to the foot, and is about three by six feet in size. The ground is brown, the borders black, and the figures white.

even he cannot be absolutely sure, such are the sharp practices utilized in making modern rugs into antiques. It is a good rule to discount the age factor, especially when purchasing in China. In Japan, Europe, and America, the pieces are more authenticated, and the statements can be verified. Certain colors and designs are an aid, but when a sale is at stake, all rugs are Ch'ien Lung rugs, and all yellows are Imperial. Occasionally one may select some genuine antiques through negotiations with impoverished Manchus, but even these possibilities are fast becoming exhausted.

In buying a modern piece, the factor of anitquity may be entirely ignored, and the rug must be weighed for its weaving, finish, and artistry. If one is able to purchase a rug which a Chinese has fashioned for himself, one may be reasonably sure it is a good piece, but it should not be purchased without a minute examination. It has been humorously related that all purchasers of rugs are required to get down on their knees, and bury their hands in the pile, the while emitting exclamations of rapture. In the modern sales methods, this is rarely seen, the rugs being brought in and displayed, while one remains comfortably seated. Yet the only way to examine a rug is to assume the posture given above, and examine every foot of it, including the back. The veteran rug buyer invariably pays more attention to the back of any rug than to the front, for he has learned that it is there that many defects are revealed, which are skillfully covered up in the front.

The weaving should be examined closely for defects, such as varying thickness of the wool yarn, uneven wefting, and irregular finishing. The closeness of the weaving should also be considered, as this furnishes a clue as to the probable durability of the rug, as well as suggesting where it might have originated. In a large rug, a diligent search for splices should be made,

to see that these are well executed if present. A well-made splice is no objection, but a poorly made one is a severe defect.

The dyeing should be most thoroughly examined. None but the chemically trained can hope to tell the type of dye employed, or the manner of dyeing, and in any case only after lengthy laboratory tests. It is popularly supposed that vegetable dyes have a sweet taste, while aniline dyes have an acid taste, but this is not always the rule, as the chapter on dyeing has explained. But any one, with an artistic eye, can detect uneven places in the dyed product. Any streaking or "barring" lowers the value of a rug, and reliable firms will not attempt to sell such a rug as a first-quality product. Streaks of this nature are particularly prevalent in those rugs which have been washed chemically, if the dyeing was not uniform prior to the washing.

The design should be carefully scanned, and compared with the original if this is possible. It is surprising how Chinese craftsmen will vary the details of designs, and render an entirely different result. They do not always appreciate the necessity for strict following of the indicated pattern, and will frequently be tempted to take a short cut where the design calls for a fully rounded curve.

In the matter of concept, the rug should be weighed as a whole, with two points in mind, viz., balance of color and patterns. In most modern pieces, thanks to the efforts of imported artists, these factors are very well handled, but it is not always so. One should make sure that the colors harmonize with each other, and their eventual surroundings. If this is satisfactory, one should determine that the pattern is in perfect balance; this will be at fault more frequently than the color scheme. The center and field should be contrasted with the borders and

edges, to see that neither predominates, unless for some specific, well-indicated, purpose.

The substance of the pile should next be examined, to determine the grade of wool, and the presence of cotton or other adulteration. The flash test is a valuable aid here, as cotton and wool fibers combust differently, being vegetable and animal products, respectively, but the microscope is more valuable, for it discloses beyond a doubt the presence of any substance other than wool, under relatively low magnification.

Finally, the rug should be examined to ascertain if it has been washed. Nowadays, a finished rug, before it reaches the hands of its eventual owner, is subjected all too frequently to a final process, viz., washing with chemicals. The question as to whether or not the chemical wash is a thing to be desired is in the controversial stage, but certain fundamental facts stand out, and should be borne in mind when purchasing a rug which has been treated with chemicals.

The process of altering the chemical properties and appearance of vegetable fibers was first described by Mercer, about the middle of the nineteenth century, and bears his name. The application of this process to wool rugs was discovered by accident, but once the idea was conceived it expanded very quickly, until to-day its use is widespread. Most of the rugs washed are treated in the United States, where the actual processes are jealously guarded trade secrets, though the principle is one well known in applied chemistry. Fundamentally, it consists of the treatment of the wool with alkalies of various kinds. The treatment of wool with alkali is a delicate process, and it is not surprising therefore that most of the first washes were terrible failures. More recently the number has been augmented by attempts to wash the rugs in China before exporting them.

The fact that wool can be dissolved in a solution of strong

alkali is readily demonstrable. The treatment of the wool in rugs with strong alkalies is therefore but a stage in their decomposition. In the hands of the untrained or unskillful, strong potash and kindred alkalies may do vast harm, and it is not surprising that the mortality among rugs being washed is very high. Since this is so, why is the chemical wash continued? The answer is twofold, the first part being a manifestation of the commercialism of the times, and the second part being a certain attitude of the rug-buying public.

That commercialism plays a prominent rôle is brazenly admitted in the advertisement of a rug-washing firm, as follows:

> "The showy and loud colors become softer and finer, and more pleasing to the eye; the surface of the wool becomes silky. The silky finish makes rugs appear twice or more valuable, especially in America."

It would thus appear that treated rugs conform to the popular idea of antiquity, which increases their value, and promotes more sales.

The principle of the process, as applied to wool, is not altogether sound, and it is quite possible that the custom will eventually be discarded, but not as long as the buying public insists on purchasing washed rugs in the belief that it is getting a superior product. Though it is true that the wash imparts a pleasing sheen to the rug, this cannot rival the natural sheen of use, which can be acquired in no other fashion. A single glance suffices to distinguish the two to an expert. What is more important, the wash actually weakens the fibers, and materially lessens the durability of the rug. In addition, the pile is shortened, and the colors are lightened in tone rather than subdued. This is entirely different from the mellowness of the antique pieces, a mellowness which appears only with the passage of

time. The wash also tends to leave the field of the rug somewhat patchy, by many erroneously thought to be a sign of age. These facts are borne out by the experience of any one familiar with the maintainance and restoration of rugs, and need but elementary laboratory proof. Criticism of the chemical wash seems justified, and it is only those rugs which are not subjected to it which can be expected to display the natural effective richness of the Chinese rug, increasing in worth with the passing years, instead of decreasing in value, or disintegrating.

It has been said there is good in everything. This is true of the washing process, but the good effect is not upon the rugs subjected to it. Rather it is upon the weavers, and more particularly upon the dyers. It has caused these to look to their knots and dyes, in order that all irregularities may be avoided, for these defects are made more prominent when the rugs are washed. As a result of this the quality of the wool, dyeing, and weaving has improved considerably. As a factory test, the chemical wash is of unmistakable value.

To decide if a certain rug is Chinese, or to tell what part of China created it, are things which are acquired only with experience. In general, the points covered in the chapter on Symbolism and those made in the analysis of rugs furnish the only clues as to nationality and origin, and when these are mastered, one may gaze upon Chinese rugs with assurance. In selecting a rug out of China, other than authenticated antique pieces, it is a safe rule to suppose that all Chinese rugs are Tientsin or Peking rugs until proven otherwise. Genuine examples of the weavings of Paotow, Ninghsia, Kashgar, and Yarkand, are few and far between, and the imitations are even more scarce, for the public is not yet awakened to the merits of these pieces. Of the commercial rugs, elaborated in Peking and Tientsin, many excellent specimens may be found, and if one exercises due cau-

tion in purchasing, there is no particular reason why truly fine rugs may not be obtained from the vast maze of weavings confronting the selector. When such rugs are obtained, the satisfaction of understanding them cannot help but react in favor of Chinese Rugs in general, which when fully known have a charm of their own, undeniable, penetrating, lasting, for of all the qualities of the Chinese Rug, permanence is not the least.

APPENDIX

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TAOISM

This cult was founded by a Chinese named Lao-tze, a contemporary of the sage Confucius, but of diametrically opposed opinions.

Lao, or Tao, made an attempt to fill the gaps in the teachings of Confucius with regard to religion, and other intellectual efforts, including natural philosophy, which were uncompleted by the great sage. In connection with the latter topic the belief of the possibility of overcoming death with the secret of life was developed, and the suggestion advanced that life of a different order might be obtained by certain efforts.

The birth, life, and death of Lao-tze, while authentic, are not well under-

stood as to details. He has been surrounded with a halo of reverence almost as great as that of Confucius himself.

Following the death of Lao, his followers branched off at a tangent, and many of the substantial truths of his teachings were either lost or deliberately set aside in favor of a more material "magic" which persists even today. In the modern sense, Taoism may be said to be an outgrowth of nature worship, religionized as a rival of Buddhism.

BUDDHISM

Buddhism is the third of the triumvirate of religious or ethical teachings which spread throughout the Chinese Empire.

Buddhism had its origin in India, and from that region gained a strong hold upon the peoples of all adjacent lands, but especially those to the east. While there is some dispute upon the point, it is probable that Buddhism was first introduced into China early in the Christian era.

Buddhism, as found in China, is highly spiritual. As Confucianism is largely politico-ethical, and Taoism is materialistic, the metaphysical is provided for by Buddhism, so that the needs of the body, soul and spirit are all taken care of. When first introduced, it apparently was much purer than at present, as there is ample evidence of it having incorporated many prevalent Chinese beliefs into its substance.

Buddhism, originally a complement of Confucianism and Taoism, in attempting to supply the needs of humans, has divided into two branches, and there has also been considerable of a degeneration in a materialistic way, yet the beliefs are followed by a vast host of the Chinese, thus making it one of the large religions of the world.

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1. Mythological Era, B. C. 2950–2357
2. Feudal Period, 2357–1122
3. Chou Dynasty, 1122–255
4. Ch'in Dynasty, 255–206
5. Dynasty of the Hans, B. C. 206–A. D. 221
6. Period of Disruption, A. D. 221–420
7. Six Dynasties, 420–618

8. T'ang Dynasty, 618–907
9. Five Dynasties, 907–960
10. Sung Dynasties (Tartar), 960–1280
11. Yüan Dynasties (Mongol), 1280–1368
12. Ming Dynasty (Chinese), 1368–1644
13. Ch'ing Dynasty (Manchu), 1644–1912
14. Republic, 1912–

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